

CONTRACT

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Name of Services- Selection of Consulting Firm for Multi Purpose Disaster Shelter Needs Assessment, Development Plan, Shelter Designs and Operational Assistance in Uttarakhand State

Contract No.- ²⁴³ /01/A-8/Services/
Shelters/PIU-USDMA/
U-PREPARE/2024-25

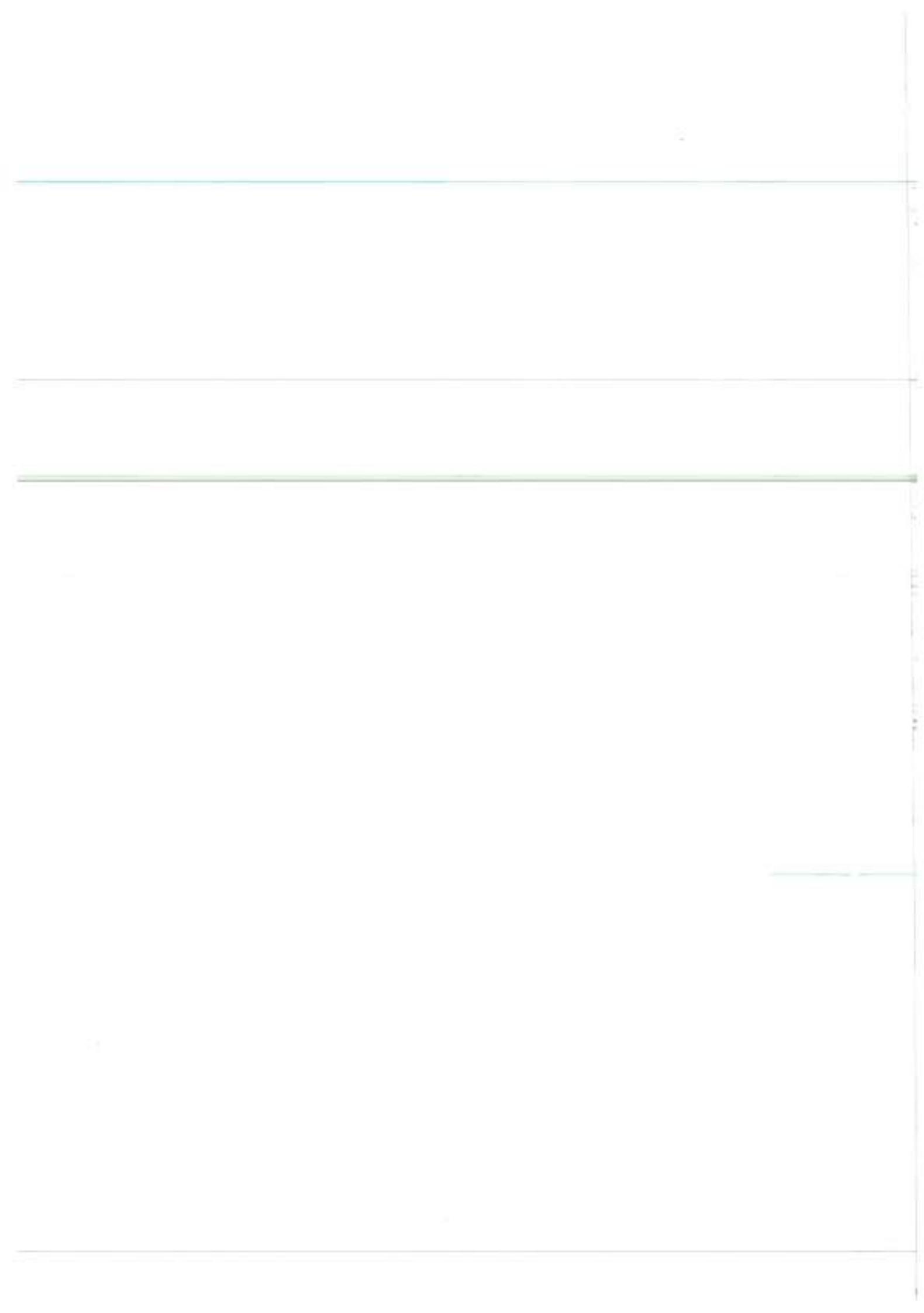
Between

Program Manager
PIU (USDMA), U-PREPARE
*5th Floor, USDMA Building, 36, IT Park, Sahastradhara Road,
Dehradun, Pin – 248013*

And

*M/s Pureways Infra Private Limited,
FH-1, Block A, Vardhman Grand Plaza, Mangalam Place,
Sector-3, Rohini, New Delhi-110085*

Dated: ^{8th} December, 2025



WHEREAS

- (a) the Client has requested the Consultant to provide certain consulting services as defined in this Contract (hereinafter called the "Services");
- (b) the Consultant, having represented to the Client that it has the required professional skills, expertise and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract;
- (c) the Client has received a loan from the International Bank for Reconstruction and Development (IBRD); toward the cost of the Services and intends to apply a portion of the proceeds of this loan to eligible payments under this Contract, it being understood that (i) payments by the Bank will be made only at the request of the Client and upon approval by the Bank; (ii) such payments will be subject, in all respects, to the terms and conditions of the loan agreement, including prohibitions of withdrawal from the loan account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by the decision of the United Nations Security council taken under Chapter VII of the Charter of the United Nations; and (iii) no party other than the Client shall derive any rights from the loan agreement or have any claim to the loan;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:
 - (a) The General Conditions of Contract (including Attachment I "Fraud and Corruption");
 - (b) The Special Conditions of Contract;
 - (c) Appendices:

Appendix A: Terms of Reference

Appendix B: Key Experts

Appendix C: Breakdown of Contract Price

Appendix D: Pre Proposal Minutes

Appendix E: Minutes of Contract Negotiation

Appendix F: Notification of Award

In the event of any inconsistency between the documents, the following order of precedence shall prevail: the Special Conditions of Contract; the Prebid Minutes, the General Conditions of Contract, including Attachment I; Appendix A; Appendix B; Appendix C; Appendix D, Appendix E and Appendix F. Any reference to this Contract shall include, where the context permits, a reference to its Appendices.

2. The mutual rights and obligations of the Client and the Consultant shall be as set forth in the Contract, in particular:


Program Manager
PIU-USDMA
U-PREPARE



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- (a) the Consultant shall carry out the Services in accordance with the provisions of the Contract; and
- (b) the Client shall make payments to the Consultant in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of Client

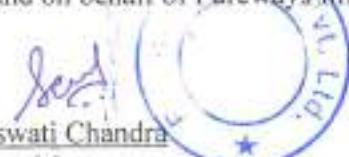
Vinod Kumar Suman, IAS
Program Director, U-PREPARE

Witness 1.  DPM, PIU-USDMA

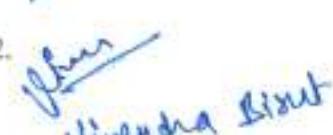
Witness 2.  Shubanshu Negi


Program Manager
PIU-USDMA
U-PREPARE

For and on behalf of Pureways Infra Pvt Ltd

 
Saraswati Chandra
Project Manager

Witness 1.  Anil Kumar

Witness 2.  Vineetra Dixit



Special Conditions of Contract

| Number of GC Clause | Amendments of, and Supplements to, Clauses in the General Conditions of Contract |
|----------------------------|--|
| 1.1(a) | The Contract shall be construed in accordance with the law of India |
| 4.1 | The language is: English. |
| 6.1 and 6.2 | <p>The addresses are:</p> <p>Client : Program Manager, PIU- USDMA, Uttarakhand Disaster Preparedness & Resilience Project (U-PREPARE) 5th Floor, USDMA Building, 36, IT Park, Sahastradhara Road, Dehradun-248013, Uttarakhand</p> <p>E-mail: piuusdma.uprepare@gmail.com, procurement.piuusdma@gmail.com</p> <p>Consultant : M/s Pureways Infra Pvt Ltd. FHI, Block A, Vardhman Grand Plaza, Mangalam Place, Sector – 3, Rohini, New Delhi</p> |
| 8.1 | <i>JV/Consortium or sub-consulting the contract (whole or in-part): Not Allowed</i> |
| 9.1 | <p>The Authorized Representatives are:</p> <p>For the Client: Dy. Program Manager, PIU-USDMA, U-PREPARE</p> <p>For the Consultant: Mr. Saraswati Chandra, Project Manager</p> |
| 11.1 | <p>The effectiveness conditions are the following:</p> <p>Signing of Contract by both the parties, after due approvals.</p> <p><i>Submission of Interest-bearing advance payment Bank Guarantee (The BG should be unconditional, irrevocable and Non-Transferrable)</i></p> |
| 12.1 | <p>Termination of Contract for Failure to Become Effective:</p> <p>The time period shall be <i>One Month</i>.</p> |
| 13.1 | <p>Commencement of Services:</p> <p>The number of days shall be <i>15 days from the contract signing</i>.</p> |


Program Manager
PIU-USDMA

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| | Confirmation of Key Experts' availability to start the Assignment shall be submitted to the Client in writing as a written statement signed by each Key Expert atleast 7 days before the deployment. |
| 14.1 | <p>Expiration of Contract:</p> <p>The time period shall be: <i>42 Months</i></p> |
| 21 b. | <p>The Client reserves the right to determine on a case-by-case basis whether the Consultant should be disqualified from providing goods, works or non-consulting services due to a conflict of a nature described in Clause GCC 21.1.3</p> <p>Yes</p> |




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| 23.1 | <p>The following limitation of the Consultant's Liability towards the Client can be subject to the Contract's negotiations:</p> <p>"Limitation of the Consultant's Liability towards the Client:</p> <p>(a) Except in the case of gross negligence or willful misconduct or otherwise on the part of the Consultant or on the part of any person or a firm acting on behalf of the Consultant in carrying out the Services, the Consultant, with respect to damage caused by the Consultant to the Client's property, shall not be liable to the Client:</p> <ul style="list-style-type: none"> (i) for any indirect or consequential loss or damage; and (ii) for any direct loss or damage that exceeds [insert a multiplier, e.g.: one, two, three] times the total value of the Contract; <p>(b) This limitation of liability shall not</p> <ul style="list-style-type: none"> (i) affect the Consultant's liability, if any, for damage to Third Parties caused by the Consultant or any person or firm acting on behalf of the Consultant in carrying out the Services; (ii) be construed as providing the Consultant with any limitation or exclusion from liability which is prohibited by the Applicable Law in India". <p><i>Regarding the fixation of liability for any loss, the decision of Program Director, U-PREPARE/ Program Manager, PIU-USDMA, U-PREPARE will be final and legally binding & acceptable to the consultant.</i></p> |
| 24.1 | <p>The insurance coverage against the risks shall be as follows:</p> <p>(a) Professional liability insurance, with a minimum coverage of INR 1,88,78,041</p> |
| 27.1 | <i>No Exemptions</i> |
| 27.2 | <p>The Consultant shall not use software(s), drawings, designs, data, documents and other related information produced for the contract for purposes unrelated to this Contract. If found so then penal action may be initiated.</p> |
| 37.1 (a) through (f) | <i>Deleted</i> |
| 37.1(g) | <i>Not Applicable</i> |
| 43.1 | The Contract price is: Rs. INR 1,88,78,041 (inclusive of local taxes). |



| | <p>Any local taxes chargeable in respect of this Contract for the Services provided by the Consultant shall be paid by the Consultant. The Client shall only reimburse Goods & Services Tax (GST) payable on the contract value by the consultants, as per Applicable Law in India subject to the Client, performing such duties in regard to the deduction of taxes as may be lawfully imposed. However, Consultant shall have to produce to the Client, all relevant documents establishing the proof of payment/ filing of return to the tax authority etc. The consultant should be registered itself for GST with appropriate authority in India & shall provide the Registration Number to the Client.</p> | | | | | | | | | | | | | | | | | | | | |
|---|--|------|---|-----------------------------|--|-----------------------|---------|----------------------|---------|--------------------------------|---------|---|--|---|----------|-----------------------------------|---------|---------------------------|---------|--|----------|
| | <p>The amount of such taxes is INR 28,79,701 (GST), which is included in contract price above</p> | | | | | | | | | | | | | | | | | | | | |
| 44.1 and 44.2 | <p>The consultants and the Personnel shall pay the taxes, taxes, duties, fees, levies and other impositions levied under the existing, amended or enacted laws during life of this contract and the client shall perform such duties in this regard to the deduction of such taxes as may be lawfully imposed.</p> <p>The Client shall only reimburse the Goods and Services Tax (GST) payable on the contract value by the consultants, as per Applicable Law in India, subject to the Client, performing such duties in regard to the deduction of taxes as may be lawfully imposed. However, Consultant shall have to produce to the Client, all relevant documents establishing the proof of payment/ filing of return to the tax authority etc.</p> | | | | | | | | | | | | | | | | | | | | |
| 46.2 | <p>The Payment Schedule:</p> <ul style="list-style-type: none"> ➢ Payment Schedule For Design Stage: (A=70% value of the contract bond) <table border="1"> <thead> <tr> <th>Task</th><th>Percentage Payment on Acceptance and Approval</th></tr> </thead> <tbody> <tr> <td>D1 Assignment-level Reports</td><td></td></tr> <tr> <td>D1.1 Inception Report</td><td>5% of A</td></tr> <tr> <td>D1.2 Mid-term Report</td><td>5% of A</td></tr> <tr> <td>D1.3 Assignment Closing Report</td><td>5% of A</td></tr> <tr> <td>D2 Comprehensive disaster shelter needs assessment and shelter development plan</td><td></td></tr> <tr> <td>D2.1 Multipurpose Disaster Shelter Needs Assessment</td><td>10% of A</td></tr> <tr> <td>D2.2 State-level Shelter Strategy</td><td>5% of A</td></tr> <tr> <td>D2.3 Draft Shelter Policy</td><td>5% of A</td></tr> <tr> <td>D2.4 Draft Operational Plans for Multipurpose Shelters</td><td>10% of A</td></tr> </tbody> </table> | Task | Percentage Payment on Acceptance and Approval | D1 Assignment-level Reports | | D1.1 Inception Report | 5% of A | D1.2 Mid-term Report | 5% of A | D1.3 Assignment Closing Report | 5% of A | D2 Comprehensive disaster shelter needs assessment and shelter development plan | | D2.1 Multipurpose Disaster Shelter Needs Assessment | 10% of A | D2.2 State-level Shelter Strategy | 5% of A | D2.3 Draft Shelter Policy | 5% of A | D2.4 Draft Operational Plans for Multipurpose Shelters | 10% of A |
| Task | Percentage Payment on Acceptance and Approval | | | | | | | | | | | | | | | | | | | | |
| D1 Assignment-level Reports | | | | | | | | | | | | | | | | | | | | | |
| D1.1 Inception Report | 5% of A | | | | | | | | | | | | | | | | | | | | |
| D1.2 Mid-term Report | 5% of A | | | | | | | | | | | | | | | | | | | | |
| D1.3 Assignment Closing Report | 5% of A | | | | | | | | | | | | | | | | | | | | |
| D2 Comprehensive disaster shelter needs assessment and shelter development plan | | | | | | | | | | | | | | | | | | | | | |
| D2.1 Multipurpose Disaster Shelter Needs Assessment | 10% of A | | | | | | | | | | | | | | | | | | | | |
| D2.2 State-level Shelter Strategy | 5% of A | | | | | | | | | | | | | | | | | | | | |
| D2.3 Draft Shelter Policy | 5% of A | | | | | | | | | | | | | | | | | | | | |
| D2.4 Draft Operational Plans for Multipurpose Shelters | 10% of A | | | | | | | | | | | | | | | | | | | | |



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| D2.5 Shelter Specifications and Design | 10% of A |
| D2.6 Model Shelter DPRs | 10% of A |
| D2.7 Site-specific DPRs for Pilot Shelters | 10% of A |
| D3 Dissemination Package | |
| D3.1 Open Access Documentation | |
| D3.2 Set of Created Data and Methods Published in Open Access | 25% of A |
| | 100% of A |

➤ **Payment Schedule for Implementation Design Support Stage:**
(B=30% value of the contract bond)

| S. No. | Deliverables | Fee Payable |
|--------|--|-------------|
| 1 | Completion of 20% of overall physical progress of civil work (It is expected that 20% of overall implementation of the design part is achieved) | 20% of B |
| 2 | Completion of 50% of overall physical progress of civil work (It is expected that 50% of overall implementation of the design part is achieved)) | 30% of B |
| 3 | Completion of 100% of overall physical progress of civil work (It is expected that 100 % of the implementation of the design part is achieved) | 40% of B |
| 4 | Satisfactory Completion of overall project | 10% of B |

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| 46.2.1 | The following provisions shall apply to the advance payment and the advance bank payment guarantee: NA |
| 46.2.4 | The account is: 918030100526447 (Axis Bank, DLF Gurgaon, HR) |
| 47.1 | Interest on Delayed Payment: Not Applicable |
| 50.1 | <p>Disputes shall be settled by arbitration in accordance with the following provisions:</p> <ol style="list-style-type: none"> 1. <u>Selection of Arbitrators.</u> Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three (3) arbitrators, in accordance with the following provisions: <ol style="list-style-type: none"> (a) Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty |

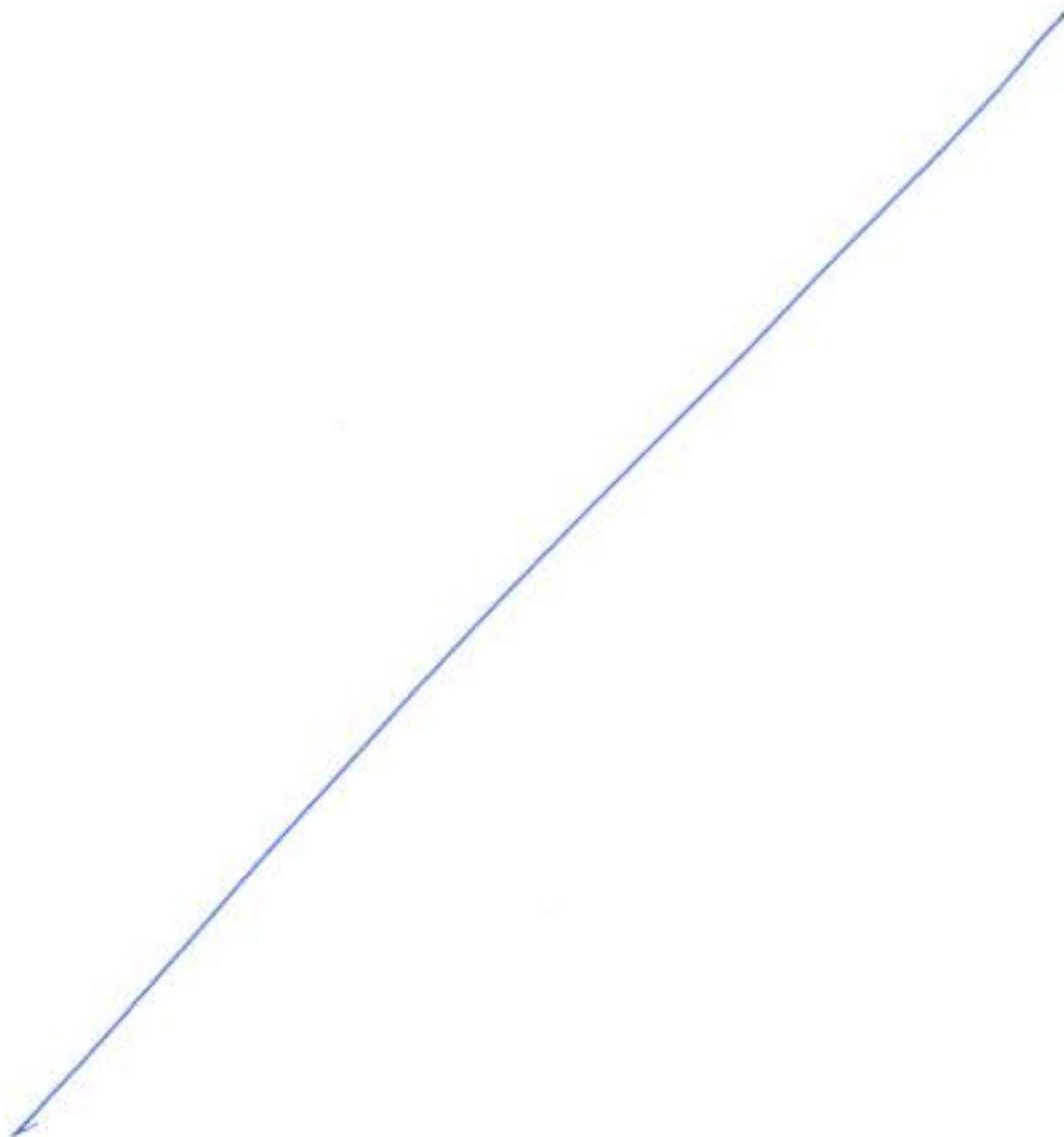


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| | <p>(30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to <i>[name an appropriate professional body, e.g., Indian Council of Arbitration/President of the Institution of Engineers (India)/The International Centre for Alternative Disputes Resolution (India)*]</i> for a list of not fewer than five (5) nominees and, on receipt of such list, the Parties shall alternately strike names therefrom, and the last remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, <i>[insert the name of the same professional body as above]</i> shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute.</p> |
| | <p>(b) Where the Parties do not agree that the dispute concerns a technical matter, the Client and the Consultant shall each appoint one (1) arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the latter of the two (2) arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by <i>[name an appropriate appointing authority, e.g., Indian Council of Arbitration/President of the Institution of Engineers (India)/The International Centre for Alternative Disputes Resolution (India)*]</i>.</p> <p>(c) If, in a dispute subject to paragraph (b) above, one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has named an arbitrator may apply to the <i>[name the same appointing authority as in said paragraph (b)]</i> to appoint a sole arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the sole arbitrator for that dispute.</p> |

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| | <p>2. <u>Rules of Procedure</u>. Arbitration proceedings shall be conducted in accordance with the procedure of the Arbitration & Conciliation Act 1996, of India (As Amended time to time).</p> <p>3. <u>Substitute Arbitrators</u>. If for any reason an arbitrator is unable to perform his/her function, a substitute shall be appointed in the same manner as the original arbitrator.</p> <p>4. <u>Nationality and Qualifications of Arbitrators</u>. The sole arbitrator or the third arbitrator appointed pursuant to paragraphs 1(a) through 1(c) above shall be a recognized legal or technical expert with extensive experience in relation to the matter in dispute.</p> |
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| | <p>5. <u>Miscellaneous.</u> In any arbitration proceeding hereunder:</p> <ul style="list-style-type: none"> (a) proceedings shall, unless otherwise agreed by the Parties, be held in the city where the contract is signed; (b) the English language shall be the official language for all purposes; (c) the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement. (d) Where the value of the contract is Rs.50 million and below, the disputes or differences arising shall be referred to the Sole Arbitrator. The Sole Arbitrator should be appointed by agreement between the parties; failing such agreement, by the appointing authority, namely the Indian Council of Arbitration/President of the Institution of Engineers (India)/The International Centre for Alternative Disputes Resolution (India)*. (e) The Arbitrator should give final award within 180 days of starting of the proceedings (f) Performance under the contract shall continue during the arbitration proceedings and payments due to the consultant by the Client shall not be withheld, unless they are the subject matter of the arbitration proceedings. |
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* Choose one alternative. Insert Chairman of the Executive Committee of the Indian Roads Congress (for highway projects) or any other appropriate institution (for other types of consultancies).

Alternatively

Apart from the adhoc arbitration services obtained through mutually agreed Arbitrator(s) as above, Institutional arbitration services are also available in India. Institutional arbitration (and mediation) dispute resolution mechanisms can be gainfully used, preferably for relatively larger contracts. Following clause may be included, if it is decided to use Institutional Services for arbitration for resolution of disputes, and in such a case other clauses related to Arbitration/Arbitrator would be deleted. In the sample clause below, substitute the reference to 'Rules of Domestic Commercial Arbitration of the Indian Council of Arbitration' by the specific institution that is sought to be engaged e.g. The International Centre for Alternative Dispute Resolution (ICADR), The Indian Institute of Arbitration and Mediation (IIAM), Indian Chamber's Council of Arbitration, Delhi International Arbitration Centre (DIA), Construction Industry Arbitration Council (CIAC), Council For National and International

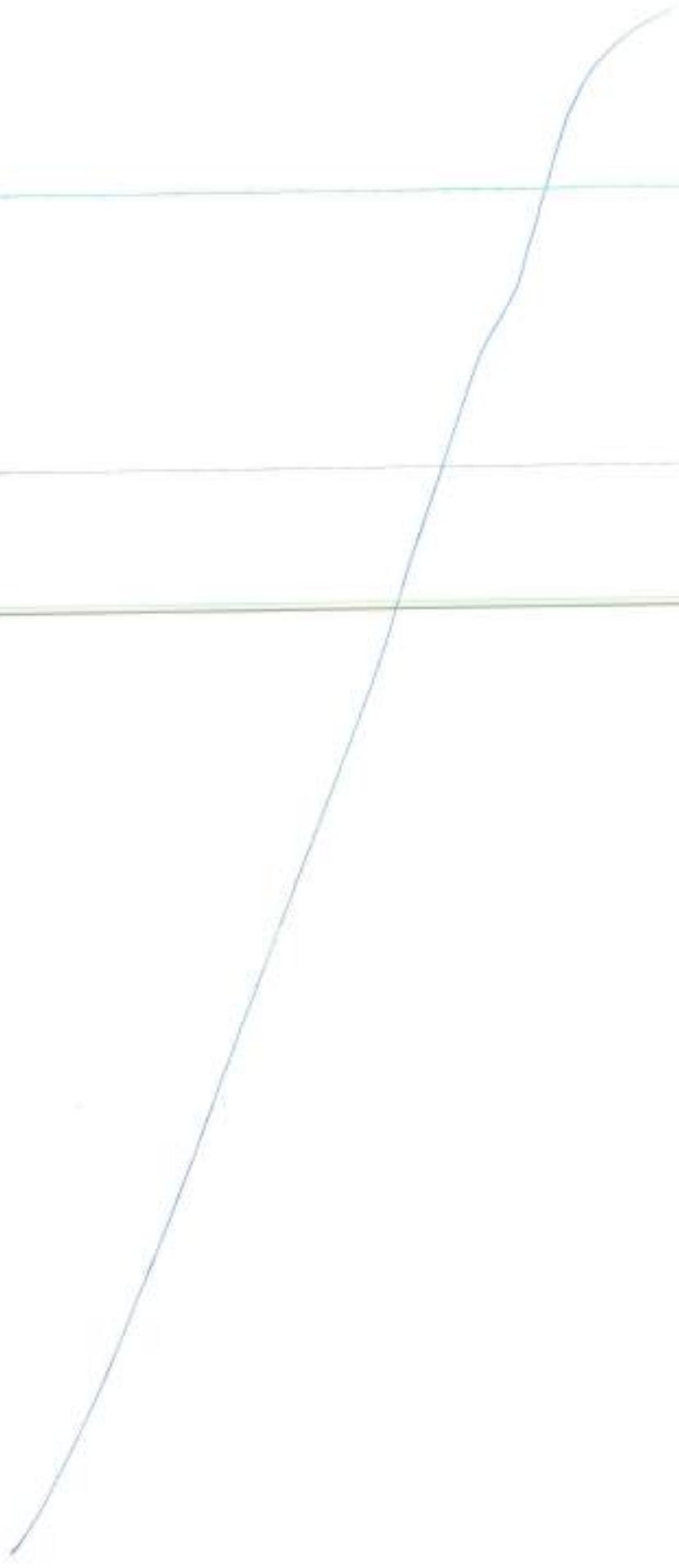


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| | <p><i>Commercial Arbitration, London Court of International Arbitration (India Centre) or the like.]</i></p> <p>"Any dispute or difference whatsoever arising between the parties out of or relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by arbitration in accordance with the Rules of Domestic Commercial Arbitration of the Indian Council of Arbitration and the award made in pursuance thereof shall be binding on the parties.</p> <p>The arbitral tribunal shall consist of 3 Arbitrators, arbitration proceedings shall be held at Dehradun, India and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English". <i>[ICA rules provide for arbitration tribunal of 3 arbitrators if the value of claim is over Rs 10 Million unless the parties have agreed otherwise for a sole arbitrator].</i></p> |
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I. General Conditions of Contract

A. GENERAL PROVISIONS

1. Definitions

- 1.1. Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:
- (a) "**Applicable Law**" means the laws and any other instruments having the force of law in the Client's country, or in such other country as may be specified in the **Special Conditions of Contract (SCC)**, as they may be issued and in force from time to time,
 - (b) "**Bank**" means the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA),
 - (c) "**Borrower**" means the Government, Government agency or other entity that signs the financing agreement with the Bank,
 - (d) "**Client**" means the implementing agency that signs the Contract for the Services with the Selected Consultant,
 - (e) "**Client's Personnel**" refers to the staff, labor and other employees (if any) of the Client engaged in fulfilling the Client's obligations under the Contract; and any other personnel identified as Client's Personnel, by a notice from the Client to the Consultant,
 - (f) "**Consultant**" means a legally-established professional consulting firm or entity selected by the Client to provide the Services under the signed Contract,
 - (g) "**Contract**" means the legally binding written agreement signed between the Client and the Consultant and which includes all the attached documents listed in its paragraph 1 of the Form of Contract (the General Conditions (GCC), the Special Conditions (SCC), and the Appendices),
 - (h) "**Day**" means a working day unless indicated otherwise,
 - (i) "**Effective Date**" means the date on which this Contract comes into force and effect pursuant to Clause GCC 11,
 - (j) "**Experts**" means, collectively, Key Experts, Non-Key Experts, or any other personnel of the Consultant, Sub-consultant or JV member(s) assigned by the Consultant to perform the Services or any part thereof under the Contract,
 - (k) "**Foreign Currency**" means any currency other than the currency of the Client's country,
 - (l) "**GCC**" means these General Conditions of Contract,
 - (m) "**Government**" means the government of the Client's country,



- (n) "Joint Venture (JV)" means an association with or without a legal personality distinct from that of its members, of more than one entity where one member has the authority to conduct all businesses for and on behalf of any and all the members of the JV, and where the members of the JV are jointly and severally liable to the Client for the performance of the Contract.
- (o) "Key Expert(s)" means an individual professional whose skills, qualifications, knowledge and experience are critical to the performance of the Services under the Contract and whose Curricula Vitae (CV) was taken into account in the technical evaluation of the Consultant's proposal.
- (p) "Local Currency" means the currency of the Client's country.
- (q) "Non-Key Expert(s)" means an individual professional provided by the Consultant or its Sub-consultant to perform the Services or any part thereof under the Contract.
- (r) "Party" means the Client or the Consultant, as the case may be, and "Parties" means both of them.
- (s) "SCC" means the Special Conditions of Contract by which the GCC may be amended or supplemented but not overwritten.
- (t) "Services" means the work to be performed by the Consultant pursuant to this Contract, as described in Appendix A hereto.
- (u) "Sub-consultants" means an entity to whom/which the Consultant subcontracts any part of the Services while remaining solely liable for the execution of the Contract.
- (v) "Third Party" means any person or entity other than the Government, the Client, the Consultant or a Sub-consultant.

2. Relationship between the Parties

2.1. Nothing contained herein shall be construed as establishing a relationship of master and servant or of principal and agent as between the Client and the Consultant. The Consultant, subject to this Contract, has complete charge of the Experts and Sub-consultants, if any, performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.

3. Law Governing Contract

3.1. This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

4. Language

4.1. This Contract has been executed in the language specified in the SCC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.



- 5. Headings** 5.1. The headings shall not limit, alter or affect the meaning of this Contract.
- 6. Communications** 6.1. Any communication required or permitted to be given or made pursuant to this Contract shall be in writing in the language specified in Clause GCC 4. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent to such Party at the address specified in the SCC.
 6.2. A Party may change its address for notice hereunder by giving the other Party any communication of such change to the address specified in the SCC.
- 7. Location** 7.1. The Services shall be performed at such locations as are specified in Appendix A hereto and, where the location of a particular task is not so specified, at such locations, whether in the Government's country or elsewhere, as the Client may approve.
- 8. Authority of Member in Charge** 8.1. In case the Consultant is a Joint Venture, the members hereby authorize the member specified in the SCC to act on their behalf in exercising all the Consultant's rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments from the Client.
- 9. Authorized Representatives** 9.1. Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract by the Client or the Consultant may be taken or executed by the officials specified in the SCC.
- 10. Fraud and Corruption** 10.1. The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the Bank's Sanctions Framework, as set forth in Attachment I to the GCC.
 a. Commissions and Fees 10.2. The Client requires the Consultant to disclose any commissions, gratuities or fees that may have been paid or are to be paid to agents or any other party with respect to the selection process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee. Failure to disclose such commissions, gratuities or fees may result in termination of the Contract and/or sanctions by the Bank.



B. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF CONTRACT

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| <p>11. Effectiveness of Contract</p> | <p>11.1. This Contract shall come into force and effect on the date (the "Effective Date") of the Client's notice to the Consultant instructing the Consultant to begin carrying out the Services. This notice shall confirm that the effectiveness conditions, if any, listed in the SCC have been met.</p> |
| <p>12. Termination of Contract for Failure to Become Effective</p> | <p>12.1. If this Contract has not become effective within such time period after the date of Contract signature as specified in the SCC, either Party may, by not less than twenty two (22) days written notice to the other Party, declare this Contract to be null and void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party with respect hereto.</p> |
| <p>13. Commencement of Services</p> | <p>13.1. The Consultant shall confirm availability of Key Experts and begin carrying out the Services not later than the number of days after the Effective Date specified in the SCC.</p> |
| <p>14. Expiration of Contract</p> | <p>14.1. Unless terminated earlier pursuant to Clause GCC 19 hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SCC.</p> |
| <p>15. Entire Agreement</p> | <p>15.1. This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.</p> |
| <p>16. Modifications or Variations</p> | <p>16.1. Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any proposals for modification or variation made by the other Party.</p> <p>16.2. In cases of substantial modifications or variations, the prior written consent of the Bank is required.</p> |
| <p>17. Force Majeure</p> | |
| <p>a. Definition</p> | <p>17.1. For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible under the circumstances, and subject to those requirements, includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse</p> |



weather conditions, strikes, lockouts or other industrial action
confiscation or any other action by Government agencies.

17.2. Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party's Experts, Sub-consultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected to both take into account at the time of the conclusion of this Contract, and avoid or overcome in the carrying out of its obligations hereunder.

17.3. Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

b. No Breach of Contract

17.4. The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract.

c. Measures to be Taken

17.5. A Party affected by an event of Force Majeure shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

17.6. A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any case not later than fourteen (14) calendar days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give written notice of the restoration of normal conditions as soon as possible.

17.7. Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

17.8. During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant, upon instructions by the Client, shall either:

- demobilize, in which case the Consultant shall be reimbursed for additional costs they reasonably and necessarily incurred, and, if required by the Client, in reactivating the Services; or
- continue with the Services to the extent reasonably possible, in which case the Consultant shall continue to be paid under the terms of this Contract and be reimbursed for additional costs reasonably and necessarily incurred.



17.9. In the case of disagreement between the Parties as to the existence or extent of Force Majeure, the matter shall be settled according to Clauses GCC 49 & 50.

18. Suspension

18.1. The Client may, by written notice of suspension to the Consultant, suspend part or all payments to the Consultant hereunder if the Consultant fails to perform any of its obligations under this Contract, including the carrying out of the Services, provided that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultant to remedy such failure within a period not exceeding thirty (30) calendar days after receipt by the Consultant of such notice of suspension.

19. Termination

19.1. This Contract may be terminated by either Party as per provisions set up below:

a. By the Client

- 19.1.1. The Client may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (f) of this Clause. In such an occurrence the Client shall give at least thirty (30) calendar days' written notice of termination to the Consultant in case of the events referred to in (a) through (d); at least sixty (60) calendar days' written notice in case of the event referred to in (e); and at least five (5) calendar days' written notice in case of the event referred to in (f):
- (a) If the Consultant fails to remedy a failure in the performance of its obligations hereunder, as specified in a notice of suspension pursuant to Clause GCC 18;
 - (b) If the Consultant becomes (or, if the Consultant consists of more than one entity, if any of its members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;
 - (c) If the Consultant fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause GCC 50.1;
 - (d) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days;
 - (e) If the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract;
 - (f) If the Consultant fails to confirm availability of Key Experts as required in Clause GCC 13.



- 19.1.2. Furthermore, if the Client determines that the Consultant has engaged in Fraud and Corruption in competing for or in executing the Contract, then the Client may, after giving fourteen (14) calendar days written notice to the Consultant, terminate the Consultant's employment under the Contract.
- b. By the Consultant
- 19.1.3. The Consultant may terminate this Contract, by not less than thirty (30) calendar days' written notice to the Client, in case of the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause.
- (a) If the Client fails to pay any money due to the Consultant pursuant to this Contract and not subject to dispute pursuant to Clause GCC 45.1 within forty-five (45) calendar days after receiving written notice from the Consultant that such payment is overdue.
 - (b) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days.
 - (c) If the Client fails to comply with any final decision reached as a result of arbitration pursuant to Clause GCC 50.1.
 - (d) If the Client is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Consultant may have subsequently approved in writing) following the receipt by the Client of the Consultant's notice specifying such breach.
- c. Cessation of Rights and Obligations
- 19.1.4. Upon termination of this Contract pursuant to Clauses GCC 12 or GCC 19 hereof, or upon expiration of this Contract pursuant to Clause GCC 14, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Clause GCC 22, (iii) the Consultant's obligation to permit inspection, copying and auditing of their accounts and records set forth in Clause GCC 25 and to cooperate and assist in any inspection or investigation, and (iv) any right which a Party may have under the Applicable Law.
- d. Cessation of Services
- 19.1.5. Upon termination of this Contract by notice of either Party to the other pursuant to Clauses GCC 19a or GCC 19b, the Consultant shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultant and equipment and materials furnished by the



Client, the Consultant shall proceed as provided, respectively, by Clauses GCC 27 or GCC 28.

- e. **Payment upon Termination** 19.1.6. Upon termination of this Contract, the Client shall make the following payments to the Consultant:

 - (a) payment for Services satisfactorily performed prior to the effective date of termination; and
 - (b) in the case of termination pursuant to paragraphs (d) and (e) of Clause GCC 19.1.1, reimbursement of any reasonable cost incidental to the prompt and orderly termination of this Contract, including the cost of the return travel of the Experts.

C. OBLIGATIONS OF THE CONSULTANT

20. General

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| a. Standard of Performance | <p>20.1. The Consultant shall perform the Services and carry out the Services with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Consultant shall always act, in respect of any matter relating to this Contract or to the Services, as a faithful adviser to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with the third parties.</p> <p>20.2. The Consultant shall employ and provide such qualified and experienced Experts and Sub-consultants as are required to carry out the Services.</p> <p>20.3. The Consultant may subcontract part of the Services to an extent and with such Key Experts and Sub-consultants as may be approved in advance by the Client. Notwithstanding such approval, the Consultant shall retain full responsibility for the Services.</p> |
| b. Law Applicable to Services | <p>20.4. The Consultant shall perform the Services in accordance with the Contract and the Applicable Law and shall take all practicable steps to ensure that any of its Experts and Sub-consultants, comply with the Applicable Law.</p> <p>20.5. Throughout the execution of the Contract, the Consultant shall comply with the import of goods and services prohibitions in the Client's country when</p> <p>(a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country; or</p> |

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- (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that country or any payments to any country, person, or entity in that country.
- 20.6. The Client shall notify the Consultant in writing of relevant local customs, and the Consultant shall, after such notification, respect such customs.
- 21. Conflict of Interest**
- a. **Consultant Not to Benefit from Commissions, Discounts, etc.**
- 21.1. The Consultant shall hold the Client's interests paramount, without any consideration for future work, and strictly avoid conflict with other assignments or their own corporate interests.
- 21.1.1 The payment of the Consultant pursuant to GCC F (Clauses GCC 43 through 47) shall constitute the Consultant's only payment in connection with this Contract and, subject to Clause GCC 21.1.3, the Consultant shall not accept for its own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or in the discharge of its obligations hereunder, and the Consultant shall use its best efforts to ensure that any Sub-consultants, as well as the Experts and agents of either of them, similarly shall not receive any such additional payment.
- 21.1.2 Furthermore, if the Consultant, as part of the Services, has the responsibility of advising the Client on the procurement of goods, works or services, the Consultant shall comply with the Bank's Applicable Regulations, and shall at all times exercise such responsibility in the best interest of the Client. Any discounts or commissions obtained by the Consultant in the exercise of such procurement responsibility shall be for the account of the Client.
- b. **Consultant and Affiliates Not to Engage in Certain Activities**
- 21.1.3 The Consultant agrees that, during the term of this Contract and after its termination, the Consultant and any entity affiliated with the Consultant, as well as any Sub-consultants and any entity affiliated with such Sub-consultants, shall be disqualified from providing goods, works or non-consulting services resulting from or directly related to the Consultant's Services for the preparation or implementation of the project.
- c. **Prohibition of Conflicting Activities**
- 21.1.4 The Consultant shall not engage, and shall cause its Experts as well as its Sub-consultants not to engage, either directly or indirectly, in any business or professional activities that would conflict with the activities assigned to them under this Contract.



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| d. Strict Duty to Disclose Conflicting Activities | 21.1.5 The Consultant has an obligation and shall ensure that its Experts and Sub-consultants shall have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Client, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Consultant or the termination of its Contract. |
| 22. Confidentiality | 22.1. Except with the prior written consent of the Client, the Consultant and the Experts shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the Consultant and the Experts make public the recommendations formulated in the course of, or as a result of, the Services. |
| 23. Liability of the Consultant | 23.1. Subject to additional provisions, if any, set forth in the SCC, the Consultant's liability under this Contract shall be provided by the Applicable Law. |
| 24. Insurance to be taken out by the Consultant | 24.1. The Consultant (i) shall take out and maintain, and shall cause any Sub-consultants to take out and maintain, at its (or the Sub-consultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverage specified in the SCC, and (ii) at the Client's request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums therefore have been paid. The Consultant shall ensure that such insurance is in place prior to commencing the Services as stated in Clause GCC 13. |
| 25. Accounting, Inspection and Auditing | 25.1. The Consultant shall keep, and shall make all reasonable efforts to cause its Sub-consultants to keep, accurate and systematic accounts and records in respect of the Services and in such form and detail as will clearly identify relevant time changes and costs. 25.2. Pursuant to paragraph 2.2 e. of Attachment 1 to the General Conditions, the Consultant shall permit and shall cause its agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit, the Bank and/or persons appointed by the Bank to inspect the site and/or the accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have such accounts, records and other documents audited by auditors appointed by the Bank. The Consultant's and its Subcontractors' and subconsultants' attention is drawn to Clause GCC 10.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and |



audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

26. Reporting Obligations

26.1. The Consultant shall submit to the Client the reports and documents specified in **Appendix A**, in the form, in the numbers and within the time periods set forth in the said Appendix.

27. Proprietary Rights of the Client in Reports and Records

27.1. Unless otherwise indicated in the SCC, all reports and relevant data and information such as maps, diagrams, plans, databases, other documents and software, supporting records or material compiled or prepared by the Consultant for the Client in the course of the Services shall be confidential and become and remain the absolute property of the Client. The Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof. The Consultant may retain a copy of such documents, data and/or software but shall not use the same for purposes unrelated to this Contract without prior written approval of the Client.

27.2. If license agreements are necessary or appropriate between the Consultant and third parties for purposes of development of the plans, drawings, specifications, designs, databases, other documents and software, the Consultant shall obtain the Client's prior written approval to such agreements, and the Client shall be entitled at its discretion to require recovering the expenses related to the development of the program(s) concerned. Other restrictions about the future use of these documents and software, if any, shall be specified in the SCC.

28. Equipment, Vehicles and Materials

28.1. Equipment, vehicles and materials made available to the Consultant by the Client, or purchased by the Consultant wholly or partly with funds provided by the Client, shall be the property of the Client and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultant shall make available to the Client an inventory of such equipment, vehicles and materials and shall dispose of such equipment, vehicles and materials in accordance with the Client's instructions. While in possession of such equipment, vehicles and materials, the Consultant, unless otherwise instructed by the Client in writing, shall insure them at the expense of the Client in an amount equal to their full replacement value.

28.2. Any equipment or materials brought by the Consultant or its Experts into the Client's country for the use either for the project or personal use shall remain the property of the Consultant or the Experts concerned, as applicable.



29. Code of Conduct

Not used

30. Forced Labor

30.1. The Consultant, including its Subconsultants, shall not employ or engage forced labor. Forced labor consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements.

No persons shall be employed or engaged who have been subject to trafficking. Trafficking in persons is defined as the recruitment, transportation, transfer, harboring or receipt of persons by means of the threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of power, or of a position of vulnerability, or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purposes of exploitation.

31. Child Labor

31.1. The Consultant, including its Subconsultants, shall not employ or engage a child under the age of 14 unless the national law specifies a higher age (the minimum age).

The Consultant, including its Subconsultants, shall not employ or engage a child between the minimum age and the age of 18 in a manner that is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

The Consultant, including its Subconsultants, shall only employ or engage children between the minimum age and the age of 18 after an appropriate risk assessment has been conducted by the Consultant with the Client's consent. The Consultant shall be subject to regular monitoring by the Client that includes monitoring of health, working conditions and hours of work.

Work considered hazardous for children is work that, by its nature or the circumstances in which it is carried out, is likely to jeopardize the health, safety, or morals of children. Such work activities prohibited for children include work:

- (a) with exposure to physical, psychological or sexual abuse;
- (b) underground, underwater, working at heights or in confined spaces;
- (c) with dangerous machinery, equipment or tools, or involving handling or transport of heavy loads;
- (d) in unhealthy environments exposing children to hazardous substances, agents, or processes, or to temperatures, noise or vibration damaging to health; or



(e) under difficult conditions such as work for long hours, during the night or in confinement on the premises of the employer.

32. Non-Discrimination and Equal Opportunity

32.1. The Consultant shall not make decisions relating to the employment or treatment of Experts on the basis of personal characteristics unrelated to inherent job requirements. The Consultant shall base the employment of Experts on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to any aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices.

Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination. The Consultant shall provide protection and assistance as necessary to ensure non-discrimination and equal opportunity, including for specific groups such as women, people with disabilities, migrant workers and children (of working age in accordance with Clause GCC 31).

33. Training of Experts

33.1. The Consultant shall provide appropriate sensitization to the Experts on social aspects of the Contract, including on prohibition of SEA and SH.

The Consultant shall provide training on SEA and SH, including its prevention, to any of its Experts who has a role to supervise other Experts.

D. CONSULTANT'S EXPERTS AND SUB-CONSULTANTS

34. Description of Key Experts

34.1. The title, agreed job description, minimum qualification and estimated period of engagement to carry out the Services of each of the Consultant's Key Experts are described in Appendix B.

35. Replacement of Key Experts

35.1. Except as the Client may otherwise agree in writing, no changes shall be made in the Key Experts.

35.2. Notwithstanding the above, the substitution of Key Experts during Contract execution may be considered only based on the Consultant's written request and due to circumstances outside the reasonable control of the Consultant, including but not limited to death or medical incapacity. In such case, the Consultant shall forthwith provide as a replacement, a person of equivalent or better



qualifications and experience, and at the same rate of remuneration.

- 36. Removal of Experts or Sub-consultants**
- 36.1. If the Client finds that any of the Experts or Sub-consultant:
- (a) persists in any misconduct or lack of care;
 - (b) carries out duties incompetently or negligently;
 - (c) fails to comply with any provision of the Contract;
 - (d) based on reasonable evidence, is determined to have engaged in Fraud and Corruption during the execution of the Services; the Consultant shall, at the Client's written request, provide a replacement.
- 36.2. In the event that any of Key Experts, Non-Key Experts or Sub-consultants is found by the Client to be incompetent or incapable in discharging assigned duties, the Client specifying the grounds therefore, may request the Consultant to provide a replacement.
- 36.3. Any replacement of the removed Experts or Sub-consultants shall possess better qualifications and experience and shall be acceptable to the Client.
- 36.4. Subject to the requirements in Clause GCC 36.3, and notwithstanding any requirement from the Client to request a replacement, the Consultant shall take immediate action as appropriate in response to any violation of (a) through (e) above. Such immediate action shall include removing (or causing to be removed) from carrying out the Services, any Expert who engages in (a) to (e) above.
- 36.5. The Consultant shall bear all costs arising out of or incidental to any removal and/or replacement of such Experts.

E. OBLIGATIONS OF THE CLIENT

- 37. Assistance and Exemptions**
- 37.1. Unless otherwise specified in the SCC, the Client shall use its best efforts to:
- (a) Assist the Consultant with obtaining work permits and such other documents as shall be necessary to enable the Consultant to perform the Services.
 - (b) Assist the Consultant with promptly obtaining, for the Experts and, if appropriate, their eligible dependents, all necessary entry and exit visas, residence permits, exchange permits and any other documents required for



their stay in the Client's country while carrying out the Services under the Contract.

- (c) Facilitate prompt clearance through customs of any property required for the Services and of the personal effects of the Experts and their eligible dependents.
- (d) Issue to officials, agents and representatives of the Government all such instructions and information as may be necessary or appropriate for the prompt and effective implementation of the Services.
- (e) Assist the Consultant and the Experts and any Sub-consultants employed by the Consultant for the Services with obtaining exemption from any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity in the Client's country according to the applicable law in the Client's country.
- (f) Assist the Consultant, any Sub-consultants and the Experts of either of them with obtaining the privilege, pursuant to the applicable law in the Client's country, of bringing into the Client's country reasonable amounts of foreign currency for the purposes of the Services or for the personal use of the Experts and of withdrawing any such amounts as may be earned therein by the Experts in the execution of the Services.
- (g) Provide to the Consultant any such other assistance as may be specified in the SCC.

38. Access to Project Site

38.1. The Client warrants that the Consultant shall have, free of charge, unimpeded access to the project site in respect of which access is required for the performance of the Services. The Client will be responsible for any damage to the project site or any property thereon resulting from such access and will indemnify the Consultant and each of the experts in respect of liability for any such damage, unless such damage is caused by the willful default or negligence of the Consultant or any Sub-consultants or the Experts of either of them.

39. Change in the Applicable Law Related to Taxes and Duties

39.1. If, after the date of this Contract, there is any change in the applicable law in the Client's country with respect to taxes and duties which increases or decreases the cost incurred by the Consultant in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Contract shall be increased or decreased accordingly by agreement between the Parties hereto, and corresponding adjustments shall be made to the Contract price amount specified in Clause GCC 39.1.



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| 40. Services, Facilities and Property of the Client | 40.1. The Client shall make available to the Consultant and the Experts, for the purposes of the Services and free of any charge, the services, facilities and property described in the Terms of Reference (Appendix A) at the times and in the manner specified in said Appendix A. |
| 41. Counterpart Personnel | <p>41.1. The Client shall make available to the Consultant free of charge such professional and support counterpart personnel, to be nominated by the Client with the Consultant's advice, if specified in Appendix A.</p> <p>41.2. Professional and support counterpart personnel, excluding Client's liaison personnel, shall work under the exclusive direction of the Consultant. If any member of the counterpart personnel fails to perform adequately any work assigned to such member by the Consultant that is consistent with the position occupied by such member, the Consultant may request the replacement of such member, and the Client shall not unreasonably refuse to act upon such request.</p> |
| 42. Payment Obligation | 42.1. In consideration of the Services performed by the Consultant under this Contract, the Client shall make such payments to the Consultant for the deliverables specified in Appendix A and in such manner as is provided by GCC F below. |
| F. PAYMENTS TO THE CONSULTANT | |
| 43. Contract Price | <p>43.1. The Contract price is fixed and is set forth in the SCC. The Contract price breakdown is provided in Appendix C.</p> <p>43.2. Any change to the Contract price specified in Clause GCC 43.1 can be made only if the Parties have agreed to the revised scope of Services pursuant to Clause GCC 16 and have amended in writing the Terms of Reference in Appendix A.</p> |
| 44. Taxes and Duties | <p>44.1. The Consultant, Sub-consultants and Experts are responsible for meeting any and all tax liabilities arising out of the Contract unless it is stated otherwise in the SCC.</p> <p>44.2. As an exception to the above and as stated in the SCC, all local identifiable indirect taxes (itemized and finalized at Contract negotiations) are reimbursed to the Consultant or are paid by the Client on behalf of the Consultant.</p> |
| 45. Currency of Payment | 45.1. Any payment under this Contract shall be made in the currency (ies) of the Contract. |
| 46. Mode of Billing and Payment | 46.1. The total payments under this Contract shall not exceed the Contract price set forth in Clause GCC 43.1. |



46.2. The payments under this Contract shall be made in lump-sum instalments against deliverables specified in Appendix A. The payments will be made according to the payment schedule stated in the SCC.

46.2.1 *Advance payment:* Unless otherwise indicated in the SCC, an advance payment shall be made against an advance payment bank guarantee acceptable to the Client in an amount (or amounts) and in a currency (or currencies) specified in the SCC. Such guarantee (i) is to remain effective until the advance payment has been fully set off, and (ii) is to be in the form set forth in Appendix D, or in such other form as the Client shall have approved in writing. The advance payments will be set off by the Client in equal portions against the lump-sum installments specified in the SCC until said advance payments have been fully set off.

46.2.2 *The Lump-Sum Installment Payments.* The Client shall pay the Consultant within sixty (60) days after the receipt by the Client of the deliverable(s) and the cover invoice for the related lump-sum installment payment. The payment can be withheld if the Client does not approve the submitted deliverable(s) as satisfactory in which case the Client shall provide comments to the Consultant within the same sixty (60) days period. The Consultant shall thereupon promptly make any necessary corrections, and thereafter the foregoing process shall be repeated.

46.2.3 *The Final Payment.* The final payment under this Clause shall be made only after the final report have been submitted by the Consultant and approved as satisfactory by the Client. The Services shall then be deemed completed and finally accepted by the Client. The last lump-sum installment shall be deemed approved for payment by the Client within ninety (90) calendar days after receipt of the final report by the Client unless the Client, within such ninety (90) calendar day period, gives written notice to the Consultant specifying in detail deficiencies in the Services, the final report. The Consultant shall thereupon promptly make any necessary corrections, and thereafter the foregoing process shall be repeated.

46.2.4 All payments under this Contract shall be made to the accounts of the Consultant specified in the SCC.

46.2.5 With the exception of the final payment under 46.2.3 above, payments do not constitute acceptance of the whole Services nor relieve the Consultant of any obligations hereunder.

47. Interest on Delayed Payments

47.1. If the Client had delayed payments beyond fifteen (15) days after the due date stated in Clause GCC 46.2.2, interest shall be paid to the Consultant on any amount due by, not



paid on, such due date for each day of delay at the annual rate stated in the SCC.

G. FAIRNESS AND GOOD FAITH

48. Good Faith

48.1. The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.

H. SETTLEMENT OF DISPUTES

49. Amicable Settlement

49.1. The Parties shall seek to resolve any dispute amicably by mutual consultation.

49.2. If either Party objects to any action or inaction of the other Party, the objecting Party may file a written Notice of Dispute to the other Party providing in detail the basis of the dispute. The Party receiving the Notice of Dispute will consider it and respond in writing within fourteen (14) days after receipt. If that Party fails to respond within fourteen (14) days, or the dispute cannot be amicably settled within fourteen (14) days following the response of that Party, Clause GCC 50.1 shall apply.

50. Dispute Resolution

50.1. Any dispute between the Parties arising under or related to this Contract that cannot be settled amicably may be referred to by either Party to the adjudication/arbitration in accordance with the provisions specified in the SCC.



Attachment 1

Fraud and Corruption

1. Purpose

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

- a. Defines, for the purposes of this provision, the terms set forth below as follows:
 - i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
 - iii. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
 - iv. "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - v. "obstructive practice" is:
 - (a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.
- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines



at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;

- d. Pursuant to the Bank's Anti- Corruption Guidelines and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;¹ (ii) to be a nominated² sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
- e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents personnel, permit the Bank to inspect³ all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

¹ For the avoidance of doubt, a sanctioned party's inability to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

² A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid, or (ii) appointed by the Borrower.

³ Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.



BOQ Summary Details
Tender Title: Hiring of Consultancy Firm for Multi-Purpose Disaster Shelter Need Assessment, Development Plan, Shelter Design and Operational Assistance in Uttarakhand State under U-PREPARE Project
Tender ID: 2025_GRID1_83937_1

| Sheet Name | Sl.No | Bidder Name | Amount | Bid Rank |
|------------|-------|--|-------------|----------|
| BoQ1 | 1 | Pureways Infra Private Limited (BID ID -388911) | 15998340.00 | L1 |
| | 2 | Almondz Global Infra Consultant Limited (BID ID -388632) | 31061000.00 | L2 |



eProcurement System Government of Uttarakhand

Created By: Yuval Giri

Tender Title: Hiring of Consultancy Firm for Multi-Purpose Disaster Shelter Needs Assessment, Development plan, Shelter Design and Operational Assistance in Uttarakhand State under U-PREPARE Project

Tender ID: 2025_GRD1_8397_1

Tender Inviting Authority: Program Manager, Project Implementation Unit, USOMA, U-PREPARE

Name of Work: Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs, and Operational Assistance in Uttarakhand State under U-PREPARE Project

Package No.: 01A-SERVICES-SHELTERS/UJUSOMA/U-PREPARE/2024-25

SCHEDULE OF WORK / ITEM(S)

| S.No | Description of Work / Item(s) | No. of City | Units | Estimated Rate | Purways Infra Private Limited (GSTN-HA) BID ID: 38811 | |
|--------|--|-------------|----------|----------------|---|--------|
| | | | | | Rate | Amount |
| 1.01 | Consultancy Service for Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs, and Operational Assistance in Uttarakhand State under U-PREPARE Project | | | | | |
| 1.01.1 | Total cost of Financial Proposal (Rates must be quoted excluding GST) | | 1.00 Job | | | |

| L1 Amount | L1 Vendor |
|-------------|-------------------------------|
| 15998340.00 | Purways Infra Private Limited |

15998340.00

3105100.00

Total in Figures

Lowest Amount Quoted BY: Purways Infra Private Limited(15998340.00)



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Item Rate Box

Name of Work: Multipurpose Disaster Shelter Needs Assessment Development Plan - Shelter Requirements
Render Inviting Authority: Program Manager, Project Implementation Unit- USDDMA, U-PREPARE

Package No.: 014-A-SERVICES/SHelters/PIU-USDMANU-PREPARE/2024-2025

Name of the
Bidder/Bidding
Firm /
Company : Purwaja Intra Private Limited

(This BOD template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Value in column 1)



Pureways Infra Private Limited



(Formerly known as Growever Infra Private Limited)

FORM FIN-1 FINANCIAL PROPOSAL SUBMISSION FORM

Location: New Delhi
Date: 29.06.2025

To:
The Program Manager,
Project Implementation Unit (PIU) - USDMA, U-PREPARE,
5th Floor, USDMA Building, 36, IT Park, Sahastradhara Road,
Dehradun-248013, Uttarakhand

Dear Sirs:

We, the undersigned, offer to provide the Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs, and Operational Assistance in Uttarakhand State under U-PREPARE Project in accordance with your Request for Proposal dated [Insert Date] and our Technical Proposal.

Our attached Financial Proposal is for the amount of Rs.1,59,98,340/- (Indian Rupees One Crore Fifty Nine Lakh Ninety Eight Thousand Three Hundred Forty Only), excluding of all indirect local taxes in accordance with ITC 25.1 in the Data Sheet. The estimated amount of local indirect taxes is Rs. 28,79,701/- (Indian Rupees Twenty Eight Lakh Seventy Nine Thousand Seven Hundred One Only) Insert amount in words and figures} which shall be confirmed or adjusted, if needed, during negotiations. (Please note that all amounts shall be the same as in Form FIN-2).

Our Financial Proposal shall be valid and remain binding upon us, subject to the modifications resulting from Contract negotiations, for the period of time specified in the Data Sheet, ITC 12.1.

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

We remain,
Yours sincerely,

Signature (of Consultant's authorized representative) (In full and initials):

Full name: Arvind Kumar Dheer

Title: AGM – Tender

Name of Consultant: Pureways Infra Private Limited

(Formerly known as Growever Infra Private Limited)

Capacity: Authorized Signatory

Address: FH-1, Block A, Vardhaman Grand Plaza, Mangalam Place, Sector-3, Rohini, New Delhi-110085, Phone/fax: 08882914449

Email: tenders@pureways.co.in, arvinddheer@pureways.co.in

CIN No.: U45300DL2017PTC318787

Regd. Office: FH-1, A-Block, Vardhaman Grand Plaza, Mangalam Place, Sector-3, Rohini, Delhi-110085, भारत (INDIA)

Corporate Office: 101, Aggarwal City Square, Mangalam Place, Sector-3, Rohini, Delhi-110085, भारत (INDIA)

info@pureways.co.in, www.pureways.co.in, +91-1-47512342/44

ISO 9001:2015 Certified Company





FORM FIN - 2 (SUMMARY OF COSTS)

| S.No. | Item | Cost |
|-------|--|-------------------|
| | | Indian Rupees |
| 1 | Cost of the Financial Proposal including: | |
| | (1) Remuneration | 13,110,000 |
| | (2) Reimbursables | 2,888,340 |
| | Total Cost of the Financial Proposal: | 15,998,340 |
| 2 | Good & Services Tax (Indirect Local Taxes) | 2,879,701 |



Page No. 1 of 1





FORM FIN-3 Breakdown of Remuneration

A. Remuneration Cost

| No. | Name | Positions (as TECH-6) | Person-Month Remuneration Rate in Indian Rupees | Time Input in Person/Month (from TECH-6) | Total in Indian Rupees |
|------------------------|----------------------------|---|---|--|------------------------------|
| Key Experts | | | | | |
| K-1 | Dr. Ishwer Datt Gupta | Team Leader | 260,000 | 9.250 | 2,405,000 |
| | | | 260,000 | 2.750 | 715,000 |
| K-2 | Naresh Kumar Mathur | Disaster Risk Management/Shelter Specialist | 200,000 | 8.750 | 1,750,000 |
| | | | 200,000 | 3.250 | 650,000 |
| K-3 | Dr. Santosh Kumar Singh | Geo Spatial Analysis Expert | 175,000 | 10.250 | 1,793,750 |
| | | | 175,000 | 1.750 | 306,250 |
| K-4 | Vivek Sood | Structural Engineer | 210,000 | 8.250 | 1,732,500 |
| | | | 210,000 | 0.750 | 157,500 |
| K-5 | Nishant Saxena | Architect | 150,000 | 8.250 | 1,237,500 |
| | | | 150,000 | 0.750 | 112,500 |
| K-6 | Niraj Parashar | Community Engagement/Social | 110,000 | 4.250 | 467,500 |
| | | | 110,000 | 1.750 | 192,500 |
| K-7 | Akhter Rasool Bhat | Environmental Management/Safeguard | 120,000 | 4.250 | 510,000 |
| | | | 120,000 | 1.750 | 210,000 |
| Non-Key Experts | | | | | Total Cost 13,110,000 |
| NK-1 | Nivas Kumar | Quantity Surveyor | 75,000 | 5.000 | 375,000 |
| | | | 75,000 | 1.000 | 75,000 |
| NK-2 | Parth Sarthi | MEP Expert | 70,000 | 5.000 | 350,000 |
| | | | 70,000 | 1.000 | 70,000 |



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FORM FIN-4 Breakdown of Reimbursable Expenses

| No. | Type of Reimbursable Expenses | Unit | Unit Cost | Quantity | Total in Indian Rupees |
|------------|---|-------|-----------|----------|------------------------|
| 1 | Data collection (from all the stake holder) | LS | 120,750 | - | 120,750 |
| 2 | Topographical Survey | LS | 598,920 | - | 598,920 |
| 3 | Geotechnical Investigations | LS | 905,625 | - | 905,625 |
| 4 | Miscellaneous Charges | | | | |
| 4.1 | Per Diem Allowance for Key Expert | Day | 3,623 | 102 | 369,495 |
| 4.2 | Per Diem Allowance for Non -Key Expert | Day | 3,019 | 16 | 48,300 |
| 4.3 | Vehicle at Dehradoon and Site Visit | month | 30,188 | 12 | 362,250 |
| 4.4 | Communication Cost | LS | 60,375 | - | 60,375 |
| 4.5 | Reproduction of Report | LS | 60,375 | - | 60,375 |
| 4.6 | Office Space | LS | 30,188 | 12 | 362,250 |
| Total Cost | | | | | 2,888,340 |



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PROJECT IMPLEMENTATION UNIT-USDMA
Uttarakhand Disaster Preparedness & Resilience Project (U-PREPARE)
5TH FLOOR, USDMA BUILDING, '36, IT PARK, SAHASTRADHARA ROAD, DEHRADUN
Website: www.uprepare.in; E-Mail piuusdma.uprepare@gmail.com

Ref. No.: 236 /A-8/PIU-USDMA/U-PREPARE/2024

Date: 18 / 11/2025

Notification of Award

To,

M/s Pureways Infra Private Limited,
FH-1, Block A, Vardhman Grand Plaza,
Mangalam Place, Sector-3, Rohini,
New Delhi-110085

Subject: Notification of Award for package No. 01/A-8/SERVICES/SHELTERS/PIU-USDMA/2024-25,
(Selection of Consulting Firm for Multi Purpose Disaster Shelter Needs Assessment, Development
Plan, Shelter Designs and Operational Assistance in Uttarakhand State) under U-PREPARE

Reference: Your proposal submitted against package No. 01/A-8/SERVICES/SHELTERS/PIU-USDMA/24-
25 (Selection of Consulting Firm for Multi Purpose Disaster Shelter Needs Assessment,
Development Plan, Shelter Designs and Operational Assistance in Uttarakhand State) under U-
PREPARE

It is to inform that your proposal for Selection of Consulting Firm for Multi Purpose Disaster Shelter
Needs Assessment, Development Plan, Shelter Designs and Operational Assistance in Uttarakhand
State under the package No. 01/A-8/SERVICES/SHELTERS/PIU-USDMA/2024-25 for the amount INR
₹1,88,78,041 (including GST amount ₹ 28,79,701 and including all other applicable taxes, levies and duties)
[Rupees One Crore Eighty Eight Lakh seventy Eight Thousand & Forty One Only] is hereby accepted.

You are requested to kindly come to the office of the undersigned for technical negotiation on
____ with the confirmation of availability of all the Key Experts mentioned in your proposal.

Kindly also submit your acceptance to this Notification of Award within 3 days from the issuance of this
letter.

Authorized Signatory: _____

Name and Title of Signatory: Vinod Kumar Suman (IAS), Program Director, U-PREPARE

Name of Agency: PIU USDMA, U-PREPARE

Date:

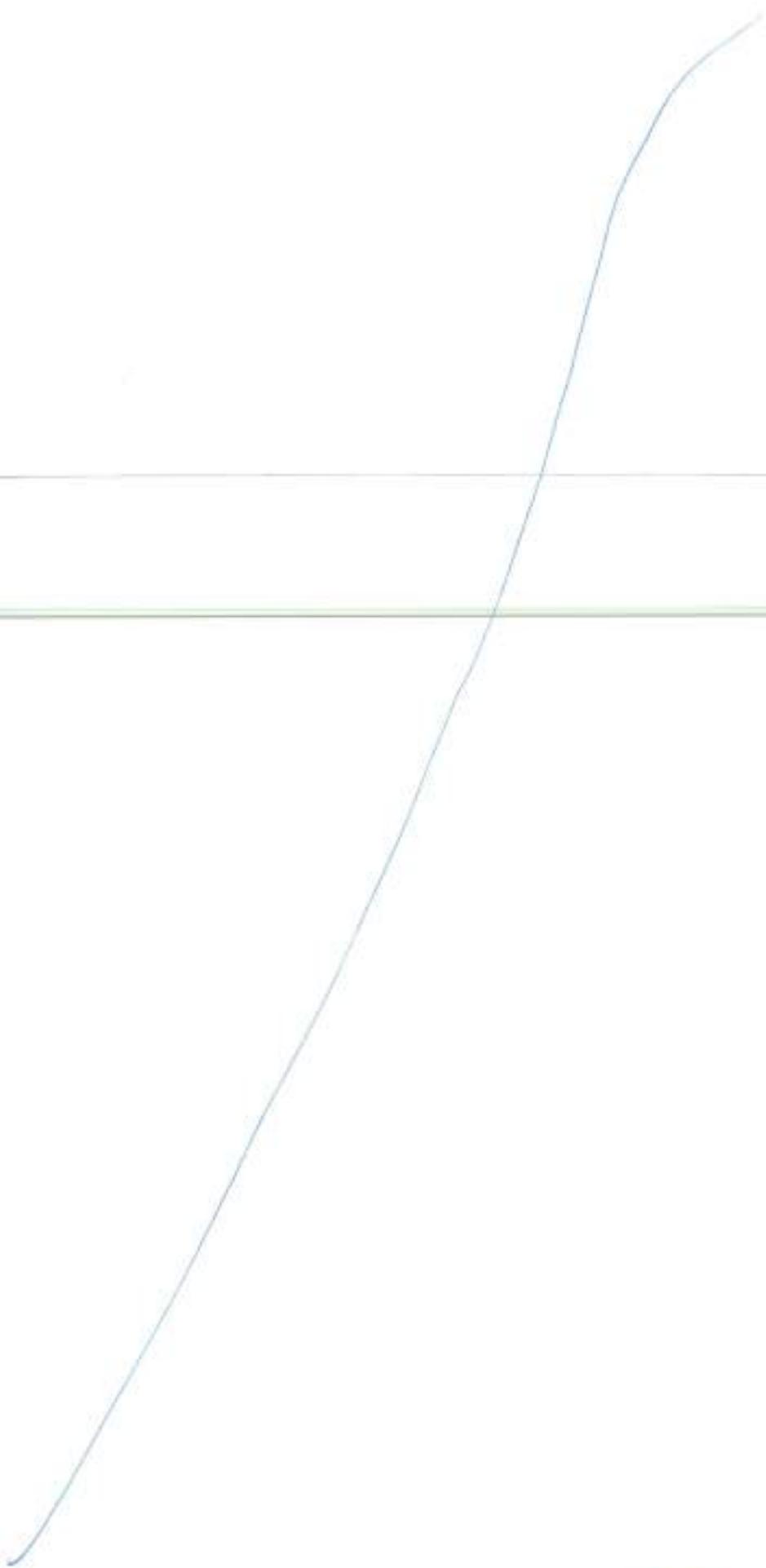
Place:

Vinod Kumar Suman, IAS
Program Director,
U-PREPARE

CC to following:

1. Program Manager, PIU-USDMA, U-PREPARE for information.
2. Finance Controller, PIU-USDMA, U-PREPARE for information.
3. Dy. Program Manager, PIU-USDMA, U-PREPARE.





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PROJECT IMPLEMENTATION UNIT-USDMA
Uttarakhand Disaster Preparedness & Resilience Project (U-PREPARE)
5TH FLOOR, USDMA BUILDING, 36, IT PARK, SAHASTRADHARA ROAD, DEHRADUN
Website: www.uprepare.in; E-Mail pd.udrpaf@gmail.com

Ref. No. : 239 /A-8 / PIU-USDMA / U-PREPARE/2024-25

Date: 01 / 12 / 2025

Minutes of the Meeting

Date 29.11.2025 at 12:00 PM

A Contract Negotiation meeting/Technical Discussion regarding Selection of Consulting Firm for Multi Purpose Disaster Shelter Needs Assessment, Development Plan, Shelter Designs and Operational Assistance in Uttarakhand State was held on 29.11.2025 at 12:00 PM at USDMA Building, 36, IT Park, Sahastradhara Road, Dehradun, in the chairmanship of Program Director, U-PREPARE.

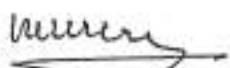
The following were present during the meeting.

- 1- Sh. Shantanu Sarkar, Director, ULMMC.
- 2- Sh. M. O. Ansari, JCEO, USDMA
- 3- Dr. Mohit Kumar Puniya, Dy. Program Manager, PIU-USDMA.
- 4- Sh. Shivanshu Negi, Manager Procurement & Contract Management, PMU, U-PREPARE
- 5- Sh. Suraj Verma, Chief Consultancy Officer, M/s Pureways Infra Pvt. Ltd.
- 6- Dr. I.D. Gupta, Team Leader, M/s Pureways Infra Pvt. Ltd.
- 7- Sh. Sarswati Chandra, Project Manager, M/s Pureways Infra Pvt. Ltd.

Following are the points of discussion:-

- 1- The consultant confirmed the availability of all the key experts proposed in the proposal for the assignment
- 2- The consultant confirmed that an office will be setup in Dehradun shortly and the team will be deployed locally.
- 3- The consultant agreed to submit the Professional Liability Insurance equal to 100% of the contract price against the consultancy assignment which shall be valid for at least 5 years from the date of contract signing.
- 4- It was directed to the consultant to plan a visit to the Odisha prior to the commencement of the services where similar assignment has been undertaken by the State and report the findings to the Program Director.

The meeting ended with a vote of thanks to all.


(Vinod Kumar Suman, IAS)
Program Director
U-PREPARE



Copy to the following for information:

1. Program Manager, PIU-USDMA, U-PREPARE.
2. Finance Controller, PIU-USDMA, U-PREPARE
3. Additional Program Director (Technical), PMU, U-PREPARE.
4. M/s Pureways Infra Private Limited, FII-1, Block A, Vardhman Grand Plaza, Mangalam Place, Sector-3, Rohini, New Delhi-110085
5. All Present in the meeting.


(Vinod Kumar Suman, IAS)
Program Director
U-PREPARE





PROJECT IMPLEMENTATION UNIT- UTTARAKHAND STATE DISASTER MANAGEMENT AUTHORITY (PIU-USDMA)
Uttarakhand Disaster Preparedness & Resilience Project (U-PREPARE)
5th Floor, USDMA Building, 36, IT Park, Sahastradhara Road, Dehradun-248013 (U.K.)
Website: www.usdma.gov.in; E-Mail piusdma.usdma@usdma.gov.in

Ref. No.: IPq/A-8/SERVICES/SHELTERS/PIU-USDMA/U-PREPARE/2024-25

Date: 28 /05 /2025

MINUTES OF PRE-PROPOSAL MEETING

Minutes of Pre-bid conference held on 26/05/2025 (11:00 AM)

Description / Name of the Work

: Hiring of Consultancy Firm for Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs, and Operational Assistance in Uttarakhand State under U-PREPARE Project

Package No./RFP

: 01/A-8/SERVICES/SHELTERS/PIU-USDMA/U-PREPARE/2024-25

Names of those Present

: As below

From Employer/ Purchaser:

| Sl. No. | Name/ Designation | Organization |
|---------|--|----------------------|
| 1. | Mr. Vinod Kumar Suman IAS, Program Director, | U-PREPARE |
| 2. | Mr. Anand Swaroop IAS, Program Manager | PIU-USDMA, U-PREPARE |
| 3. | Mr. Yuvraj Giri, MPCM, | PMU, U-PREPARE |
| 4. | Dr. Mohit Kumar Puniya, Deputy Program Manager | PIU-USDMA, U-PREPARE |
| 5. | Mr. Ankit Bhandari, PCME | PIU-USDMA, U-PREPARE |
| 6. | Mr. Dheeraj Chauhan, Office Manager | PIU-USDMA, U-PREPARE |



From Prospective Bidders:

| Sl. No. | Name / Designation | Company/ Firm Name |
|---------|--------------------|---|
| 1. | Shalinee Padhi | GKW Consult GmbH. |
| 2. | Dr. Rajnish Ranjan | DDF Consultant Pvt. Ltd. |
| 3. | Himani Tiwari | Grand Thorton |
| 4. | Sanjeet Ahlawat | Almondz Global Infra-consultant Limited |
| 5. | Sourabh | - |
| 6. | Representative | Dev Vats |



Table 1.0 Clarification:

The queries obtained from different firms and their clarification is as follows:

| Sl. No. | Clause No. of ITB/GCC/SCC | Specification as per tender | | | Response | Remarks |
|---------|---|---|--|---|----------|--|
| | | Gist of the Query | | Amendment Request | | |
| 1. | Criteria 1: Organization profile | The firm must have experience in conducting study on disaster risk assessment of all types of disaster(s) and policy support to states government in last 05 year | It is requested to modify it as below: The firm must have experience in conducting study on disaster risk assessment of all types of disaster(s) and policy support to states government, design of disaster resilient structures, retrofitting of buildings, post disaster studies/ assessments, preparation of safety guidelines and similar works in last 20 years | No Change | | Pls. refer S. No. 01 of Table 2: Addendum 01 |
| 2. | Criteria-4: Key Expert Qualifications and competence for the Assignment | Post K-1: Team Leader Minimum Qualifications and Certifications (02 marks) | Master's degree in Disaster Risk Management/ M.Tech in Civil Engineering/ M Arch or or related field: 02 marks | Amended | | |
| 3. | Criteria-4: Key Expert Qualifications and competence for the Assignment | Post K-3: Geo-Spatial Analysis Expert Qualifications and Certifications (2.00 marks) | Master's degree in Geo-Spatial Science/ GIS/ Planning/ Bachelor's degree in Planning with PG in GIS or related field | No Change | | |
| 4. | Form TECH-4 | Submission of Form TECH-4 | It is requested to clarify which Tech-4 [FTP or STP] Form is required to be submitted with the Technical Proposal. | Form TECH-4 (Fully Technical Proposal) shall be submitted with the Technical Proposal. | | |
| 5. | Implementation Support Stage | The client may require the services of any of the key experts in case an eventuality arises during entire duration of the project. | It is requested to clarify whether the Key Experts have to be retained for the entire period? Or Is there a separate team of Key & Non-Key | Key and Non-Key experts are given in the ToR. Key experts can call time to time when required during | | |



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| Sl. No. | Clause No. of IRB/GCC/SCC | Specification as per tender | List of the Query | | Response | Remarks |
|------------|------------------------------|---|--|--|---|---|
| | | | Amendment Request | Implementation | | |
| 6. | Staffing Schedule | | Experts required for Implementation Design Support Stage? | The total Man Month for key & non key experts are 12 man month but in CL D5 it is mentioned that client may require the services of any of the key experts in case an eventuality arises during entire duration of both stages | Implementation period. | Please refer to Staffing Schedule provide in the ToR. |
| 7. | General | | Staffing Schedule details are missing in the ToR. Please provide the Staffing Schedule for | The total Man Month for key & non key experts are 12 man month but in CL D5 it is mentioned that client may require the services of any of the key experts in case an eventuality arises during entire duration of both stages | Key experts can call time to time when required during implementation period. | |
| 8. | General | Expected Man Month for both Key & Non-Key Experts need to be clarified for both Stage. As it is essential for finalization of financial proposal for the project. | A tentative cost for overall project and budget for each shelter may please be provided. | The tentative cost for the overall project and budget for each shelter will be determined by the selected consultancy firm as part of their scope of work. | | |
| 9. | General | Please clarify, if consultants are required to setup office at project sites other than Home office in Dehradun. | As outlined in the RFP, the consultancy firm will: | 1. Conduct a thorough need assessment 2. Prepare a comprehensive development plan 3. Design each shelter etc. | Based on these deliverables, the consultancy firm will provide a detailed breakdown of costs and finalize the budget. | No |



| Sl. No. | Clause No. of ITB/GCC/SCC | Gist of the Query | | Response | Remarks |
|---------|---------------------------|--|--|--|---|
| | | Specification as per tender | Amendment Request | | |
| 10. | General | Please provide a list of the identified sites (e.g., districts, tehsils, or villages) for the 10-15 shelters, along with details on land availability (e.g., size, ownership status, encumbrances). If sites are not finalized, clarify the process and timeline for site selection and the consultant's role in it. | <p>At this stage, specific sites for the shelters have not been finalized. However, the locations will be nearby the Char Dham routes in Uttarakhand State.</p> <p>The process for site selection will involve:</p> <ol style="list-style-type: none"> 1. Need assessment by the consultancy firm 2. Identification of suitable locations based on the assessment 3. Verification of land availability, ownership status, and encumbrances <p>The consultancy firm's role will include:</p> <ol style="list-style-type: none"> 1. Conducting the need assessment 2. Recommending potential sites 3. Assisting in site selection and verification | We expect the consultancy firm to work closely with stakeholders to finalize site selection and provide detailed recommendations | Please refer Cl. 6.1 of the RFP, it clearly mentioned that, proposal(s) from a joint Venture/ |
| 11. | BDS Cl. 6.1 | JV/Consortium or sub-consulting the contract (whole or in-part): Not Allowed | Please confirm whether joint ventures (JV's) or sub-consultants are permitted. If allowed, specify the maximum number of JV partners or sub-consultants, their roles, and any |  |  3 |



| Sl. No. | Clause No. of ITB/GCC/SCC | Specification as per tender | Gist of the Query | | Response | Remarks |
|---------|---|---|--|--|----------|--|
| | | | Amendment Request | Additional eligibility criteria (e.g., experience, financial capacity) | | |
| 12. | Eligibility Criteria | Criteria 1: Organization Profile | Local presence or proposal to establish office in Dehradun 02 marks. Office exists - 02 mark Only intention stated - 01 mark | Modify to allow consultants without a current Uttarakhand office to participate, provided they submit an undertaking to establish a fully operational office in Uttarakhand (e.g., in Dehradun or a project district) within 30 days of contract award, before mobilization. | Amended | Please refer S. No. 02 of Table 2, Addendum 01 |
| 13. | Experts' qualifications and competence for the Assignment | Post R-5: Architect Minimum Qualifications and Certifications (02 marks) | * Master's degree in Architect: 02 marks * Bachelor degree in Architect: 01 marks | It is requested to modify to accept a Master's degree in Architecture, Urban planning, Regional planning, or Environmental Planning for the architectural design lead, provided they have relevant experience in disaster-resilient infrastructure. | Amended | Please refer S. No. 03 of Table 2, Addendum 01 |
| 14. | General | | The ToR does not clarify the extent of the consultant's role in securing regulatory approvals (e.g., EIA, land use, building permits). | The consultant's role does not include obtaining regulatory approvals. However, the consultant will be responsible for: | | |
| | | | Please clarify the consultant's responsibilities for obtaining regulatory approvals (e.g., MoEFCC for EIA, local authorities for land use, building permits). Specify whether USDMA or other agencies will facilitate these approvals and provide timelines. | <ul style="list-style-type: none"> • Providing suitable proposals and documentation to facilitate regulatory approvals • Assisting in preparing necessary reports and submissions (e.g., EIA) • Coordinating with relevant agencies (e.g., MoEFCC, local authorities) as required | | |
| | | | USDMA or other designated agencies will be responsible for facilitating and obtaining regulatory approvals. | | | |
| | | | The consultant will provide necessary support and documentation to ensure a | | | |

| Sl. No. | Clause No. of ITB/GCC/SCC | Specification as per tender | Gist of the Query | Amendment Request | Response | Remarks |
|---|---------------------------|---|--|---|--|--|
| 15. General | | | Please provide a detailed timeline with interim milestones for key deliverables (e.g., D1.1 Needs Assessment, D2.1-D2.7 DPRs, D3.1-D3.2 Documentation) and approval processes, including expected review periods by USDMA and World Bank. | Please refer to the ToR | smooth approval process. | |
| 16. PCC Cl. 24.1 | | The insurance coverage against the risks shall be as follows: | (a) The Consultant shall maintain Professional Liability Insurance, at 100% of the contract value. (b) Third Party liability insurance, with a minimum coverage of INR 50.00 Lakh or 100% of the contract value, whichever is lesser. | The RFP requires professional liability insurance at 100% of contract value and third-party liability insurance at 1INR 50 lakh or 100% of contract value, whichever is lesser. | Please refer PCC Cl. 24.1 | |
| 17. ToR Deliverable D4: Dissemination Package | | | Deliverable D4: Dissemination Package | The ToR does not specify the format or platform for submitting open-access documentation and datasets. | For deliverables D3.1 and D3.2, the following formats are acceptable: PDF & GIS shapefiles | |
| 18. Section 6: Fraud & Corruption | | Adherence to World Bank's Anti-Corruption Guidelines | Anti-Corruption Guidelines | The RFP requires adherence to World Bank's Anti-Corruption Guidelines but does not detail the consultant's role in monitoring contractor compliance. | No | Please clarify the consultant's responsibilities for monitoring contractor compliance with anti-corruption guidelines (e.g., audits, site inspections) and reporting requirements (e.g., frequency, format) to USDMA and World Bank. |



| Sl. No. | Clause No. of ITB/GCC/SCC | Specification as per tender | Gist of the Query | Amendment Request | Response | Remarks |
|------------|-------------------------------|--|--|--|--|---------|
| 19. | General | <p>Please confirm whether USDMA or other agencies will provide existing infrastructure data {e.g., topographic surveys, geotechnical reports, hydrological maps} for the identified sites, and specify the format and timeline for data sharing.</p> | <p>The TdR does not address the availability of existing infrastructure data (e.g., topographic, geotechnical, hydrological) for the consultant's use.</p> | <p>No existing infrastructure data (e.g., topographic surveys, geotechnical reports, hydrological maps) will be provided by USDMA or other agencies.</p> | | |
| 20. | BD5 Clause 26.1 | <p>The weights given to the Technical (T) and Financial (F) Proposals are:</p> <p>T = 70% F = 30%</p> | <p>This approach ensures the consultancy firm has the flexibility to conduct their own assessments and generate data specific to the project requirements.</p> | <p>No Change</p> | <p>The consultancy firm is expected to:</p> <ul style="list-style-type: none"> • Collect and generate necessary data through their study and assessments • Provide all required data and reports as part of their deliverables under the contract • Create and generate site specific topographic survey, geotechnical investigations/ geological/ geophysical studies, hydrological studies and other related studies to design the structure. | |
| 21. | Evaluation Criteria, Criteria | <p>The firm must have experience in conducting study on disaster risk</p> | <p>We kindly request that the experience criteria be expanded to include work with central</p> | <p>Amended</p> | <p>Pls. refer S. No. 04 of</p> | |



| Sl. No. | Clause No. of ITB/GCC/SCC | Specification as per tender | Gist of the Query | Amendment Request | Response | Remarks |
|---------|--|---|--|--|--|--|
| 1: | Organization Profile, | assessment of all types of disaster(s) and policy support to the states government in last 05 years. | | government and other agencies, not just state governments, and that the experience period be extended from 5 to 10 years. | | Table 2: Addendum 01 |
| 22. | Payment Schedule | The payment schedule consists of two stages: <ul style="list-style-type: none"> • 85% value of the lump-sum amount of contract • bond for the design stage and the remaining 15% value of the lump-sum amount contract for Implementation design support stage. | | It is requested to revise the payment schedule for implementation design support stage from 15% to 5% of the lump-sum contract amount. | No Change | |
| 23. | Section 2, E Data Sheet, 15.2, Page No. 30 | The format of the Technical Proposal to be submitted is: (1) Power of Attorney to sign the Proposal | Please clarify if a separate PoA specific to this tender needs to be prepared for submission. | A separate Power of Attorney (PoA) specific to this tender is not required. A general Power of Attorney authorizing the signatory to represent the company and sign documents on its behalf would suffice. | However, please ensure the PoA: <ul style="list-style-type: none"> • Is valid and notarized • Clearly authorizes the signatory to participate in tenders and sign proposals on behalf of the company | Pls. refer S No. 05 of Table 2: Addendum 01 |
| 24. | BDS 17.1 & 19.1 | Submission of Technical proposal in hard copy | We request the authority to provide at least 72 hours from the submission on e-procurement system (20th June) for the offline submission. This will allow the consultant team additional time to submit the hard copy. | Amended | Additionally, we will request for a clarification on the number of hard copies to be submitted of Technical Proposal. | 9    |




| Sl. No. | Clause No. of ITB/GCC/SCC | Specification as per tender | Gist of the Query | Amendment Request | Response | Remarks |
|------------|-------------------------------------|---|--|---|--|---|
| 25. | Section 2, E Data Sheet, 17.4 | The proposals must be uploaded on the e-procurement portal specified in ITB 1(m) no later than: | Date: 20th June, 2025 | Time: 13:00 Hrs. (01:00 PM) local time | It is requested to give an extension of three weeks for submission of proposals. It will allow bidders adequate time to prepare technically sound and responsive proposals, considering the amendments and clarifications. | Amended |
| 26. | Criteria 1: Organization profile | The firm must have experience in conducting study on disaster risk assessment of all types of disaster(s) and policy support to the states government in last 05 years. | It is requested to modify it as below: | "The firm must have experience in conducting study on flood disaster risk assessment/ management and support to the state governments in India for disaster preparedness/ designing resilient infrastructure / Preparation of DPRs for disaster shelters in last 05 years." | No Change | Pls. refer S. No. 06 & 07 of Table 2- Addendum 01 |
| 27. | Criteria 1: Organization profile | The firm must have experience in conducting study on disaster risk assessment/management and support to the state governments in India for disaster preparedness/ designing resilient infrastructure / Preparation of DPRs for disaster shelters in last 05 years: 10 Marks | It is requested to consider the following: | Individual DPR on disaster shelters under a single contract to be considered as separate projects. | No Change | |
| | | 02 marks for each project (Max. 10 marks). | | | | |
| 28. | Data Sheet, 19.2 | Financial capacity turnover of three preceding financial years (2021-22, 2022-23 & 2023-24) from Consultancy contracts only should not be less than INR 50.00 lakh | Average annual turnover-(2021-22, 2022-23 & 2023-24) | It is requested to change the organization profile eligibility criteria as below: | No Change | Pls. refer S. No. 06 & 07 of Table 2- Addendum 01 |
| | Part A: Mandatory Criteria: | Point 2: Financial Capacity | INR 1.5 Cr. - 0.5 mark 5 Cr. - 10 Cr - 1 mark 10 Cr - 2 mark | | | |



| Sl. | Clause No. of No. ITB/GCC/SCC | Specification as per tender | Gist of the Query | | Response | Remarks |
|-----|--|--|---|---|--|---------|
| | | | | Amendment Request | | |
| 29. | Data Sheet, 19.2 Part A: Mandatory Criteria: Point 2: Financial Capacity: | Valid registration and licenses, GST and IT certificates, and audited financial reports for the last three years. | We request clarification regarding the mention of IT certificates. Kindly specify the documents that need to be submitted. | The term "IT certificates" refers to the income tax-related documents. No additional certificates beyond PAN and Income Tax Returns are required. | | |
| 30. | Staffing Schedule during Implementation Support Stage | | Kindly clarify the distribution of Man-Month for the Implementation Support Stage for remaining 30 months contract period | <ul style="list-style-type: none"> • Experts will be called upon time to time, as and when required • Support will be provided on a need basis, particularly in cases of: <ul style="list-style-type: none"> - Changes in design/DPR due to site-specific requirements - Other specific requirements that may arise during implementation. | During the Implementation Support Stage (30 months), the experts' deployment will be as follows: | |
| 31. | ToR VIII. Required qualifications of the consultancy firm and key staff, | Required consulting firm experience and qualifications Desirable: Experience with disaster risk management programs in Uttarakhand and/or other Indian Himalayan hill states. | It is requested to modify this clause and consider relevant experience in hilly terrain and not just restrictive to Himalayan states. | Pls. refer to the Eligibility Criteria for Organization Profile under Section II. BDS | | |
| 32. | SCC Cl. 43.1 | The Contract price is: Rs. | Kindly provide the indicative contract | The contract price will be | | |



| Sl. No. | Clause No. of ITB/GCC/SCC | Specification as per tender [Insert amount] [Indicate: inclusive or exclusive] of local taxes. | List of the Query Amendment Request | Response | Remarks |
|------------|---|--|---|--|------------------|
| 33. | Criteria 1: Organization profile | <p>We request the client for allowing ongoing relevant projects (having completed minimum 06 months post award) to be eligible for meeting the criteria. This will allow bidders with demonstrated experience and expertise in the field to participate.</p> | <p>During the Implementation/Design Stage, we request clarification on whether expenses related to site visits—including travel, accommodation, and food—will be borne by the Client?</p> | <p>The consultancy firm will bear all expenses related to site visits, including travel & accommodation etc. The cost for these expenses may be included in the financial proposal by the bidder, as specified in FIN FORM 4. The payments for these expenses shall be paid as per actual basis and within the ceiling of quotes prices. Kindly note that the cost of proposal will be including remuneration and reimbursable expenses combine for the purpose of evaluation.</p> | <p>No Change</p> |
| 34. | General | | | | |
| | | | | | |



Table 2.0 Addendum-1: for Package No. 01/A-8/SERVICES/SHELTERS/PIU-USDMA/U-PREPARE/2024-25

| S. No. | Clause No. ITB/GCC/SCC/Forms/ Specifications etc. | As existing | As Amended | Reference of Table 1.0 Clarification |
|--------|---|--|---|---|
| 1. | Criteria 4: Key Experts' qualifications and competence for the Assignment | Post K-1: Team Leader Minimum Qualifications and Certifications (02 marks) • Master's degree in Disaster Risk Management or related field: 02 marks | Post K-1: Team Leader Minimum Qualifications and Certifications (02 marks) • Master's degree in Disaster Risk Management/ M.Tech in Civil Engineering or related field: 02 marks | S. No. 02 |
| 2. | Criteria 1: Organization Profile | Local presence or proposal to establish office in Dehradun 02 marks. Office exists - 02 marks Only intention stated - 01 mark | Local presence or proposal to establish office in Dehradun 02 marks. Office exists - 02 marks | S. No. 12 |
| 3. | Criteria 4: Key Experts' qualifications and competence for the Assignment | Post K-5: Architect Minimum Qualifications and Certifications (02 marks) • Master's degree in Architect/ Urban Planning or related field: 02 marks • Bachelor degree in Architect: 01 marks | Post K-5: Architect Minimum Qualifications and Certifications (02 marks) • Master's degree in Architect/ Urban Planning or related field: 02 marks • Bachelor degree in Architect: 01 marks | S. No. 13 |
| 4. | Evaluation Criteria, Criteria 1: Organization Profile, | The firm must have experience in conducting study on disaster risk assessment of all types of disaster(s) and policy support to the states government in last 05 years: 10 Marks 02 marks for each project (Maximum upto 10 marks) | The firm must have experience in conducting study on disaster risk assessment of all types of disaster(s) and policy support to the central government / states government/ PSUs in last 05 years 10 Marks 02 marks for each project (Maximum upto 10 marks) | The firm must have experience in conducting study on disaster risk assessment of all types of disaster(s) and policy support to the central government / states government/ PSUs in last 05 years 10 Marks 02 marks for each project (Maximum upto 10 marks) |



| S. No. | Clause No. ITB/GCC/SCC/F orms/ Specifications etc. | As existing | As Amended | Reference of Table 1 Clarification |
|-----------|--|--|---|--|
| 5. | BDS 17.1 & 19.1 | Submission of Technical proposal in hard copy | Technical Proposals in hard copy must reach at the below address on or before 03 rd July 2025 Program Manager, PIU-USDMA, U-PREPARE USDMA Building, 5 th Floor, 36 IT Park, Sahastradhara Road, Dehradun-248013 Uttarakhand, INDIA | S. No. 24 |
| 6. | BDS 17.4 | 'The Proposals must be uploaded on the e-procurement portal specified in ITC 1(m) no later than: Date: 20th June, 2025 Time: 13:00 Hrs. (01:00 PM) local time | The Proposals must be uploaded on the e-procurement portal specified in ITC 1(m) no later than: Date: 30 th June, 2025 Time: 13:00 Hrs. (01:00 PM) local time | S. No. 25 |
| 7. | BDS 19 | The procedure for online opening of technical proposals shall be: "Technical proposal will be opened on the e-procurement portal (i.e. www.uktenders.gov.in) by the Client at the date and time indicated below. Date: 20 th June, 2025 Time: 15:00 Hrs. (03:00 PM) local time | The procedure for online opening of technical proposals shall be: Technical proposal will be opened on the e-procurement portal (i.e. www.uktenders.gov.in) by the Client at the date and time indicated below. Date: 30 th June, 2025 Time: 15:00 Hrs. (03:00 PM) local time | S. No. 25 |



Section 7. Terms of Reference

FOR

Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs, and Operational Assistance in Uttarakhand State under U-PREPARE Project

| | |
|--------------------------|---|
| Job Title | : Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs, and Operational Assistance in Uttarakhand State under U-PREPARE Project |
| Locations | : Uttarakhand, India |
| Contract Term | : Lump sum |
| Contract Duration | : 42 Months (Design Stage – 12 Months & Implementation Design Support Stage – 30 Months) |
| Start date | : After 15 days of contract award |
| Responsible to | : Program Manager, PIU-USDMA, U-PREPARE, Uttarakhand |
| Responsible for | : 1) <u>Design Stage</u> : Preparation of multipurpose disaster shelter needs assessment, staged shelter development plan, shelter typologies, and 10 Detailed Project Reports (DPRs) including preparation of bid document for 10 Multi-Purpose Disaster Shelters, detailed design, drawings, estimates planning & designing services. 2) <u>Implementation Design Support Stage</u> |



PROJECT BACKGROUND AND OBJECTIVES

I. Background

Uttarakhand is a Himalayan Mountain region that is regularly impacted by flash floods, landslides, earthquakes, wildfires, glacier lake outbursts, and cloudbursts. Uttarakhand's disaster vulnerability is further exacerbated by climate change, elevating the risk of wildfires, flash floods, landslides, and droughts. In this context, the World Bank Uttarakhand Disaster Preparedness and Resilience Project (U-PREPARE) focuses on enhancing the climate and disaster resilience of selected critical public infrastructure in Uttarakhand and strengthening the state's preparedness and emergency response capacity.

A high and increasing number of people in Uttarakhand are affected by disasters. Due to Uttarakhand's rich cultural and religious history, many tourists and pilgrims come to the state every year and often visit remote areas that are particularly vulnerable to natural hazards. As a result, tourism contributes significantly to Uttarakhand's state gross domestic product, but suffers from increasing disaster risk. Significant additional public and external investments are ongoing or planned for as outlined in the Uttarakhand tourism policy and vision for 2030.¹

In 2021, 39 million tourists visited Uttarakhand, following 22 million in 2014², many of them for tourism and pilgrimage. Four million pilgrims alone visit the main pilgrimage, Chardham Yatra. The nearly 80 percent increase in tourists between 2014 and 2021 is expected to continue to rise by seven percent annually until 2027. Applying this rate could lead to up to 70 million annual tourists in 2030.

Past disasters have resulted in loss of lives, missing persons, and temporarily inaccessible areas, primarily in the mountainous areas in the north of Uttarakhand around the Chardham Yatra. The disastrous floods in June 2013 were the most extreme recent catastrophic event. According to the post-disaster needs assessment, 580 human lives were lost, over 4,083 persons were missing, and over a hundred thousand pilgrims were stranded. Yet, there are currently no shelters in the state and the shelter needs are poorly understood. The high number of tourists brings its own risks as it can contribute to infrastructure and environmental deterioration and further increase disaster risk.

Against this background, emergency shelter needs shall be assessed to inform the design of a shelter development plan, an accompanying policy, and the construction of pilot shelters to provide a safe haven during disasters for the local population, tourists, pilgrims, and the people employed by the tourism sector. The key objective is to provide safe short-term shelter between disaster onset and evacuation. The combination of the many pilgrims and the fragile mountainous context provides a novel context with little to no global precedents.

¹ Uttarakhand Tourism, 2022. "Uttarakhand Tourism Policy 2030"

² Ibid.

II. Project's Goal and Objectives

The overarching goal of this assignment is to inform the establishment of disaster shelters in Uttarakhand to protect the local population, tourists, and pilgrims during disasters. The objectives of the assignment are the following:

1. Develop a **comprehensive, multipurpose disaster shelter needs assessment** at the state level, considering the location-specific exposure to risk and vulnerability.
2. Develop a **staged shelter development plan** that is socially inclusive, including a state-level shelter policy and strategy indicating suitable locations, area-based carrying capacity, types and priorities of shelters, and operational plans, including adequate shelter management models, and Standard Operating Procedures (SOPs). These inputs shall include a proposition of where, how, and by when to construct how many shelters of which type, considering different possible future risk and development scenarios (e.g., high vs. low growth in population and pilgrim/tourist numbers) and development pathways (e.g., extensive/medium/low shelter coverage).
3. Identify specific requirements for developed shelter typologies, including space allocations focusing on the safety and security of vulnerable groups (e.g., women, children, and senior citizens), complying with relevant national guidelines such as the Rights of Persons with Disabilities Act 2016, needed equipment, and potential uses during non-emergency situations.
4. Design ten **multipurpose shelters** using the developed typologies and prepare drawings ready for construction.
5. Design an accompanying dissemination package, including open-access publication of key consultancy outputs and methods and publication of created information as open data.
6. Provide **implementation design support** during construction of shelters, including adaptation of drawings and overall guidance.

III. Scope of the Consulting Services

The scope of work for the Consultancy is to develop a comprehensive, multipurpose disaster shelter needs assessment, staged shelter development plan, shelter typologies, and provide complete DPRs and Detailed Estimates along with implementation design support during implementation of contracts, including preparation of bid documents and support during the bidding process. It will also include preparation of Good for Construction (GFC) Drawings, technical specifications and various terms & conditions contained in the contract agreement for successful completion of the works.



ACTIVITIES (BOTH STAGES)

The consultancy firm will execute the following activities (A) in consultation with the Uttarakhand State Disaster Management Authority (USDMA), the U-PREPARE Project Implementation Unit (PIU)-USDMA, and the World Bank, divided into the following two phases.

1. Design Stage

A1 – Development of a Comprehensive Multipurpose Disaster Shelter Needs Assessment

A1.1 Analyze disaster shelter needs building on the state's disaster exposure and vulnerability and create a state-level GIS map that indicates adequate area-based shelter specifications and capacity. This should include specific proposed locations for the first batch of priority pilot shelters and defined areas for possible later shelter development. The choices shall be made based on a replicable method that considers (i) hazard exposure, (ii) vulnerability, (iii) population and tourist/pilgrim density and (iv) reliable accessibility during disasters including for vulnerable groups, among other criteria. As feasible, based on the typology of shelters, the analysis shall identify methods for engaging the local community in the planning, construction, and maintenance of the shelters. The analysis shall identify and specify a set of scenarios for likely future developments of population and tourist/pilgrim growth (timeframe of 2035 or later, including consideration of developments such as projected infrastructure expansions and new areas of interest), plan for peak demand (high tourism/pilgrimage and monsoon season) and consider flow management and possible maximum carrying capacities of tourist and pilgrimage sites to maximize safety throughout the year. Further, the assessment shall screen, map, and prioritize public buildings with high construction standards that may be turned into temporary shelters during disasters, e.g., stadiums and schools. Further, vacant land plots that are outside the exposure zones, e.g., parking lots and open spaces outside forests/wildlife crossing areas, where temporary shelters could be installed immediately after the disaster events shall be identified. A hierarchical shelter system shall help provide more flexibility in accommodating the identified needs. The key output shall provide a basis for understanding current and expected shelter needs and identifying priority locations.

A2 – Design of a Staged Shelter Development Plan and Drafting of a Shelter Policy

A2.1 Design a state-level shelter strategy indicating possible locations, including assessing the suitability of pre-identified locations that will be shared with the consultancy firm, and suggest priority pilot disaster shelter locations to be constructed under U-PREPARE and independently of the project. A staged plan for future shelters shall be prepared based on the needs assessment (A1) and result in a draft shelter policy for Uttarakhand. The output shall align with the requirements of the laws and policies for differently abled people, senior citizens, the safety of women, and other vulnerable groups. Existing infrastructure that could



serve/be amended to serve as shelter shall be assessed and integrated where adequate. Depending on locations, different shelter typologies/options (e.g., capacity, functions/operating model, construction type, material, layout with basic amenities/facilities) shall be proposed. The proposed priority locations shall include at least one of each shelter type identified.

A2.2 Establish operational plans for the multipurpose shelters (per type if and where adequate), including shelter management models, potential institutional mechanisms/business models for shelter use during non-emergency situations, related secondary uses (e.g., as a health post), and SOPs for maintenance, training, and mock drills. A monitoring and reporting system shall ensure compliance with established requirements during emergency and non-emergency periods. The activity shall draw on established best practices for multipurpose shelters in other parts of the country and worldwide. Maintenance and/or business models shall be aligned with local community needs, prioritize women-led activities, and consider the seasonality of tourism/pilgrimage, especially in areas close to the Chardham Yatra sites. Shelters should become an integrated part of Uttarakhand's emergency evacuation plan, including clear signage, easy-to-find information, consideration of various categories of differently-abled people. Details and SOPs for temporarily constructed shelters for post-disaster accommodation (e.g., tents) shall complement the new multipurpose and retrofitted shelters as per the identified needs.

A3 – Design of Shelters

A3.1 Prepare specifications for shelters (per type if and where adequate, including but not limited to designs, construction materials, and techniques), including an adequate number of model design variants (incl. drawings of schematic design) that permit adaptation to different shelter needs, space allocations with focus on vulnerable groups, safety and security (e.g., women, children, and senior citizens), compliance with relevant legislation and guidelines including the Rights of Persons with Disabilities Act 2016, needed equipment, potential uses as information/training center point, health posts, and node for Early Warning Systems (EWS). Any possible space requirements for storage of search and rescue equipment, EWS maintenance, and livelihood capital shall be explored (cf. space provision for livestock in multipurpose cyclone shelters).

A3.2 After the identification of the selected priority pilot shelter locations (A2.1), provide the civil engineering design and DPRs for those shelters including gender and accessibility audits before finalization. Prepare the complete DPRs of the selected priority pilot shelters (A2.1). Further, provide the Bill of Quantities (BOQs) of all civil engineering works and items of proposed shelters including tender drawings, technical specifications, and other tender documents (e.g., requests for proposals) to enable the specialized agency to award the works.

A4 – Provision of a Dissemination Package



A4.1 Prepare an open access documentation that outlines key outcomes of the consultancy in collaboration with USDMA, the PMU, and the World Bank. A final draft of the resulting document shall be made publicly available in open access at project closing (e.g., open repository/public preprint/working paper on the consultancy website).

A4.2 Prepare and render openly accessible data created and methods developed as part of the consultancy in collaboration with USDMA, the PMU, and the World Bank, following open data principles.

2. Implementation Design Support Stage

A5 – Implementation Design Support

A5 Provide design implementation support during the construction of shelters, including adaptation of drawings and overall guidance.

DELIVERABLES (BOTH STAGES)

The consultancy firm will be expected to provide the following Deliverables (D):

Deliverables (Design Stage):

D1. Assignment-level reports:

D1.1 Inception Report: In the Inception Report, the consultancy firm will outline a comprehensive methodology aimed at ensuring the successful completion of the task within the designated timeframe. This methodology will encompass various phases, including a preliminary survey and planning, developing the concept design, establishing the project office, determining software utilization, staffing schedule and detailed project timeline etc. It is imperative that this methodology serves as the guiding framework for the project execution to meet time-bound objectives effectively and efficiently.

D1.2 Mid-Term Report: An interim report providing updates on the assignment's progress.

D1.3 Assignment Closing Report: A final report summarizing completed activities, results achieved, lessons learned, and suggesting potential next steps.

D2. Comprehensive disaster shelter needs assessment and shelter development plan:

D2.1 Multipurpose Disaster Shelter Needs Assessment: A detailed report outlining the requirements for disaster shelters at the state level based on demographics, vulnerability, hazard mapping, accessibility, safety, and security norms, and other relevant factors, including GIS layers complementing the analysis.



D2.2 State-Level Shelter Strategy: A strategic plan detailing the selection of shelter locations, capacity planning, resource allocation, and coordination with relevant authorities, building on D2.1. The plan should be based on a multi-phase implementation approach, highlighting key locations and proposed numbers of shelters to be developed in relevant phases.

D2.3 Draft Shelter Policy: Develop a draft disaster shelter policy outlining infrastructure requirements, operational procedures, and resource allocation strategies to ensure effective response during crises, emphasizing community and gender related requirements, safety, security, and accessibility, as well as resilience.

D2.4 Draft Operational Plans for Multipurpose Shelters: Documents informing future operational plans, including minimum equipment, schedules, and mock drills informed by existing best practices globally. Different versions of the plans shall respond to diverse shelter requirements, management, and secondary purposes of the developed shelter typologies.

D3. Shelter Design:

D3.1 Shelter Specifications and Design: A detailed document specifying architectural, safety, accessibility, basic amenities/facilities (including sanitation, water supply, and waste management) and technological aspects per type of shelter for constructing and maintaining multipurpose disaster shelters, focusing on inclusivity and sustainability. It is encouraged to explore different design and construction technologies, as well as the use of renewable energy through solar panels for the pilot shelters.

D3.2 Model Shelter DPRs: Development of generic draft DPRs for a minimum of six shelter types according to the needs identified in D2.2 and D2.4 (e.g., capacity, building materials, construction/retrofitting), including typology and specifications. All DPRs shall align with the laws and policies for differently-abled people, women, children, and senior citizens. A minimum of two shelter types shall focus on retrofitting existing (public) buildings in an exemplary manner by using representative public buildings selected for retrofitting.

D3.3 Site-Specific DPRs for Pilot Shelters: Ten site-specific detailed DPRs and engineering drawings for sites selected jointly with the client based on D2.2. There should be at least one site-specific DPR for each of the six model DPR types developed in D3.2. This deliverable consists of the following parts:

- i. **Preliminary Project Report (PPR)** including preliminary drawings, Detail of Measurements (DOM), Rate analysis for non-scheduled items, cost estimate
 - a. Preparation & submission of all necessary reports, documents, drawings and designs required for clearance from civic authorities/Statutory Authorities according to applicable acts, laws, regulations etc. and make any changes desired by such authorities at no extra cost.



- b. The estimation of quantities shall be based on detailed design of all the components of the projects. The Consultant shall prepare and submit draft Detailed Project Report (DPR) in different volumes as directed by the client/employer for construction of Shelters/Buildings, which should include Main Report, Design Report, Material Report, Technical Specification, Rate Analysis, Cost Estimate, Bill of Quantity (BOQ), Drawings, Civil work contract Agreement etc.
- c. The consultant shall supply all design calculations/computer input and output giving specific reference to BIS/NBC for structural design, along with soft copies. The structural drawing showing the reinforcement details/bar bending schedule shall be prepared as per the latest edition of SP:34 (S&T). All overriding conditions prescribed by IS: 13920 or any other BIS code shall be taken into account while preparing the structural drawings.
- d. Preparation and submission of detailed designs, drawings and documents for all external utility services like electrification, water supply, sewerage, storm water drainage, fire hydrants schemes, rainwater harvesting, and other related schemes and any other specialized services as per project requirement suitable for construction and release to site including getting approvals from Client/Employer.
- e. The Design consultant shall give all references of the codes followed in the design along with the photocopies of relevant pages of codes used as part of DPR.
- f. Preparation and submission of tender drawings for the purpose of bidding process.
- g. Preparation and submission of environmental and social screening, assessment and ESMPs of each sub project as set out as in the ESMF, RPF and SEP.
- h. The Consultants shall prepare detailed plan for safety and environmental sustainability (including waste/debris management) during the construction period.
- i. Preparation of DPR with detailed estimate as per CPWD norms with complete working details, schedules, building specifications, including specification for all trades and services, and Bill of Quantities (BOQ) including various services all based on DSR (Delhi Schedule of Rates) conforming to specifications to describe the whole project adequately, supplying details of calculations of all items in schedule of quantities. Where prescribed specifications and/or schedule of rates are not provided for certain items/services, specifications and rates based on proper market rate analysis supported by minimum three Quotations from reputed/specialized agencies shall be adopted along with Engineering Market Rate Analysis for these items with the approval of the Client/Employer. Cost estimation of dismantling and removal of debris in case of demolition structure must be included in the details estimate.
- j. The consultant shall be responsible for making changes/modifications as directed by the client and stakeholders, and these changes must be incorporated into the documents. The revised document will be accepted by the competent authority, after which, it will be considered final.

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- k. The DPRs should be submitted separately for each Shelters/buildings/projects. The DPR shall consist of the following chapters:
- i. Main Report including executive summary
 - ii. Topographical survey and Contour survey, Soil Investigation & Geo technical investigation report, Construction material Report, Design base report, Specifications & schedule of finishes
 - iii. Sub-Project Specific Environment (including, OHS)and Social Management Plans.
 - iv. Detailed Design/Technical Report [Architectural, Structural and MEP (Mechanical, Electrical & Plumbing) Services design]
 - v. Schedule of Rates (SoR)
 - vi. Rate Analysis as describe above.
 - vii. Detail of measurements
 - viii. Bill of Quantities (BOQ) and Cost Estimate(s)
 - ix. Technical Specification with respect to each BOQ item
 - x. Details Drawings of existing buildings
 - xi. Bid Drawings (Architectural, structural, services etc.), the Bid drawings shall be as good as the GFC/working drawings
- ii. **Detailed Project Report (Final DPR)**
- a. Report regarding statutory approvals.
 - b. The consultant shall prepare final volumetric design development via architectural renderings of all proposals and walkthrough presentation for all type of model designing.
 - c. The Final DPR shall all comprise similar documents of the acceptance of draft DPR. However, all the comments/observations/suggestions/modifications as per statutory bodies, and competent authority/ client shall be incorporated in the final DPR and final estimates.
- iii. **Good for Construction (GFC)/Working drawings**
- a. Before signing of the Works Contract for each subproject/package, the Consultant shall provide all the necessary GFC drawings and GA drawings up to successful completion of each subproject/package. However, the other GFC drawings as per requirement of site condition shall be provided by the Consultant during the implementation design support stage (construction & supervision stage), well in advance of execution of particular item/activity. All 10 (indicative number) sites will need site specific drawings at tender stage/final DPR.
- iv. **Quality control and Construction Manual**
- a. The Consultant shall submit a Construction Supervision Manual identifying the quality requirements and /or standards for the project and documenting how the project will demonstrate compliance. The Construction Supervision Manual shall provide necessary processes and metrics for Quality Management and shall include but not limited to the following.
 - b. The quality standards that apply to the project, with reference to the technical specifications and codes.



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- c. Quality control, quality assurance and process improvement approaches for the project.
 - d. Quality control tools and techniques.
 - e. Use of the digital management information system (MIS) of the PMU/PIU; The construction supervision manual should specify the type of digital tools to be used, the interval, and the type of information (photos, videos, forms) to be submitted into the MIS to allow for quality remote supervision.
 - f. The responsibility chart/ matrix showing who will be involved in managing and ensuring quality, when and what their specific duties will be.
 - g. The metrics that shall be used to measure quality, environment management and safety during construction stage.
 - h. Specific mentions about the parts of the projects or deliverables that will be measured and their time and frequency.
 - i. Check lists for inspection of material and processes.
 - j. Flow charting of processes to detect potential quality problems, including on EHS aspects.
 - k. Scope for periodically quality audit.
 - l. Balance the needs of the quality with scope, cost, time, resources and risk.
-

The start of the Quality Management involves setting quality targets. The "Quality Assurance Process" and "Quality Control Process" shall be undertaken, to measure and report the actual quality of deliverables, as parts, phases or complete project. As part of the Quality Management, all quality issues shall be identified and resolved quickly.

As the supervision of the construction works is to be done by the PIU/Field PIU as designated for particular or number of contracts, it shall perform Quality Assurance for consistency in quality and undertake Quality Control for meeting Quality Targets, Standards and acceptability criteria. They shall identify quality issues and initiate quality improvement and implement Quality Management to ensure further quality control. The PIU/FPIUs or other Third Party as nominated by PMU/PIU shall carry out independent laboratory tests in NABL accredited Laboratories and record the findings for appropriate action.

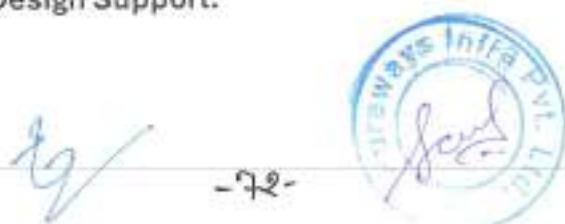
The Consultant shall prepare the Construction Supervision Manual for approval by the World Bank and the Client. It is expected that the Consultant will share the draft versions of the above plan and manuals before finalization.

D4. Dissemination Package:

D4.1 Open Access Documentation: A document outlining key outcomes, methodologies used, and critical outputs, facilitating validation and replication.

D4.2 Set of Created Data and Methods Published in Open Access: Openly accessible publication of data and methods developed during the consultancy, following open data principles.

D5. Implementation Design Support:



- The Consultant's team shall provide necessary home office input for the review, coordination, and finalization of Designs and Drawings to ensure their suitability for Good for Construction (GFC) purposes whichever and whenever required by the client during construction stage for successful completion of the project.
- If any changes/modifications are required in the design and/or drawings as per site conditions during the construction stage, the design consultant shall provide revised drawings and designs without any additional cost.
- Consultant shall provide clarifications/ modifications/ revisions during execution, if required, and provide revised data to the client for approval.
- Presentation of the project, if required by the client on specific occasion.
- The client may require the services of any of the key experts in case an eventuality arises during entire duration of the project.
- Scrutinize and approve the fabrication and shop drawings (if any) within 3 working days of submission as required under the contract with consultation of client/employer during construction stage.

IV. Finalization of construction materials and specifications

- i. The Consultancy shall approve the selection and finalization of different type of materials to be used in the project, Specifications of materials, finishing schedules and the detail report for materials/items which will be not part of standard schedule of rates i.e., non-schedule items, before going forward for preparation of draft DPR.
- ii. It is deemed to be assumed that before finalization of DPR & detail estimate, the design consultant shall design all the components of the sub projects as per standard/code provisions. However, due to any specific reasons, if the vendor-based items which required the shop drawing as per the design of particular items, items required further designing from the vendor during preparation of shop drawings at the time of execution, shall be specified by the and got approved the same from the client/employer.

V. Duration of Assignment

The expected time frame of the assignment is 42 months from contract signing, consisting of 12 months for the Design Stage and 30 Months for the Implementation Support Stage.

VI. Reporting Arrangements

1. Review of Technical Reports



The technical reports will be reviewed by a team of experts constituted by the U-PREPARE PMU and USDMA, supported by the World Bank. If corrections and further actions are needed, the consultancy firm will submit the amended report within two weeks for review and clearance by the committee. In the case that there is a need for further revision (third submission), it shall be completed in the next two weeks.

2. Progress Review

The progress of the consultancy firm's work will be monitored by a progress review committee which would be chaired by the Project Director/Program Manager, U-PREPARE, Govt. of Uttarakhand, and USDMA at each milestone. The committee will review the progress of the consultancy firm and will suggest appropriate corrections and measures per the work plan submitted by the consultancy firm. The consultancy firm will be required to give regular presentations on the progress of work in such meetings. For effective coordination and clearance of deliverables, representatives of the client and the consultancy firm shall meet every month. Besides regular meetings in Dehradun, the meetings may be held at selected sites for future shelters as per requirements.

The consultancy firm shall conduct a detailed study of shelters and submit requisite copies of complete work report/DPRs to client in accordance with the approved program. The client will apprise the consultancy firm in writing of comments on the reports and DPRs within two weeks from its date of submission. The consultancy firm shall submit revised report and design/drawing as second submission as per the comments of the client, within two weeks for issuing and approving.

3. Approval of Deliverables

The client reserves the right to approve or disapprove the deliverables upon the information available. On completion of the review, the client will return the submission with one of the following comments:

"Approved" to allow work to proceed.

"Not approved" resubmission required incorporating comments given.

Approval of drawings of shelters by the client shall encompass checking in principle only and not verifying every dimension and detailed manner. To enable the client to appreciate and understand the observations and comments of the consultancy firm, in addition to the deliverables, the consultancy firm shall submit relevant background documents that informed the deliverables, such as drawings, design calculations, explanatory notes containing adopted design criteria, loads, and a description of the methodology used.

4. Review of Computerized Analysis and Design



The following shall be compiled/document by the consultancy firm in its submittals of deliverables for review:

- The consultancy firm shall use accredited/validated software and the same shall be indicated. Design criteria, structural & geotechnical analysis, and detailed design calculations should be in editable text files and PDF. However, a minimum 3 sets of all accepted/approved documents/design and drawings would be submitted by the consultant in hard whereas, the soft copy should be submitted on CDs or pen drives.
- Details of figures of models, wherever applicable.
- All information as called for in the clause of design calculations.
- If the client requests validation sample examples or calculations from the engineering software used, the consultant will provide them at no additional cost to the client.
- The consultancy firm shall submit printouts and softcopies of all pages as appeared in the output of the computer program without disturbing the output as generated by the program. The consultancy firm shall also submit all editable files of designs and drawings.

The date of dispatch of comments to the consultancy firm from the client's office shall be considered as the date of delivery. The consultancy firm will submit comments as soft copy to the PMU and will also be required to give a presentation on the same as and when required.

To perform the above activities efficiently, the consultancy firm is required to ensure the presence of key team members at least one week each calendar month in Uttarakhand at its own cost for carrying out various design and review activities and assist the client in the approval of different reports, design documents, and drawings during the contract period and attend the meetings with the client and other stakeholders.

VII. Environment and Social Safeguards

Efforts shall be made to ensure positive contribution to the Environment & confirmation to pollution control norms and Social Safeguards. It is mandatory for the consultant to design the Shelters as per water and energy efficiency norms.

1) Environment Management

- a) Carry out categorization/screening of the subproject based on the Project's ESMF
- b) Prepare a sub-project specific environmental screening report.
- c) Conduct Environmental Assessment to assess the environmental risks and impacts of the project.
- d) Identify the health and safety risks and impacts listed in the Environmental Health & Safety guidelines of the World Bank Group.
- e) Identify any risk to material threat to the protection, conservation, maintenance and restoration of natural habitats and biodiversity.
- f) Conduct baseline studies for environmental monitoring.
- g) Prepare subproject specific Environment Management Plan (EMP) for construction of the proposed building and budget provision for complying with the EMP.



-
- h) Preparation of Debris Management Plan (identify site for debris disposal), Waste Management Plan, and other required plans, as per site requirements.
 - i) The consultant shall predict damages to the Environment and attempt to mitigate or minimize the damages by choosing appropriate site, cross-section, type of structures etc. and suggest appropriate measures in the design for protection of surrounding environment.
 - j) The consultant shall design the building in such a way to utilize natural source of energy/light and minimize use of non-renewable energy resources. In case of retrofitting, the same provision shall be incorporated.
 - k) The consultant shall prepare all necessary reports, documents, drawings, and designs required for regulatory/EIA approvals from State Level Environment Impact Assessment Committee, clearance from pollution control board, environment/forest and other civic authorities, if required.
 - l) Preparation of Forest or Civil Land Transfer Cases if required.

2) Social Safeguards

- a) Coordination and liaison with the Forest Department (District/State Level) assess land requirement and its availability and ownership and collect the land documents related to land possession of Multi-Purpose Disaster Shelters to update the DPR accordingly.
- b) Assessing, Managing and monitoring of social risks and impacts associated with each stage of project in order to achieve social outcomes consistent with projects ESMF, RPF LMP and SEP and prepare site specific Environment and Social Management Plan (ESMP). Conduct field investigations/surveys to prepare a comprehensive Social Screening/ Assessment report for each site as per ESMF Document and is to be attached with all the DPRs.
- c) The Social Screening/Assessment will be based on current information, including an accurate description and delineation of the project and any associated aspects, and social baseline data at an appropriate level in detail, sufficient to inform characterization and identification of risks and impacts and mitigation measures. The assessment will evaluate the project's potential social risks and impacts; mitigation hierarchy for adverse social impacts and seeks opportunities to enhance the positive impacts of the project. The social assessment will include stakeholder engagement as an integral part of the assessment in accordance with stakeholder engagement plan.
- d) The design of the building should be gender audited to ensure safe and secured workplace for women.
- e) Identification and implementation measures to address impacts on cultural heritage in accordance with the mitigation hierarchy will be done to consider direct, indirect and cumulative project-specific risks and impacts on cultural heritage. The environmental and social assessment as set out as in the ESMF, RPF and SEP.
- f) The consultant shall follow the project level LMP and estimate the labour requirement to prepare site specific labour management plan and include provision for use of ICT based tools for real time monitoring of compliance of labour laws and include in the ESMP for the bid documents.
- g) To mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use consultant will ensure that timely compensation for loss of assets should be provided to the Project affected families. In case of private land purchase, to execute the resettlement activities, appropriate disclosure of information and meaningful consultation will be conduct by the consultant to prepare ARAP/RAP document. Consultant will conduct a Socio-Economic Survey and prepare Resettlement Action Plan (RAP)/Abbreviated Resettlement Action Plan (A-RAP) as per the project level Resettlement Policy Framework.
- h) Conduct Consultations to identify traditional local communities. If any traditional local communities are identified, the proposed measures and action will be developed in consultation



with the affected Traditional Local Communities as per the project level ESMF. The scope and scale of the plan will be in proportionate to the potential risks and impacts of the project. The format and title of the plan will be adjusted as appropriate to the project and will reflect any alternative terminology for these communities.

- i) Conduct consultations with stakeholders in accordance to identify cultural heritage that may be affected by the potential project; consider the significance of the cultural heritage affected by the project; assess the potential risks and impacts; and explore avoidance and mitigation options in accordance with the ESMP
- ii) Implement the SEP and document the actions implemented to - dissemination of information, consultation, collaboration and partnership - with stakeholders through planning, implementation and O&M stages.
- iii) Coordination and liaison with the PMU/PIU and other stakeholders involved in the social screening/assessment preparation.
- iv) Review, Editing and Finalization of the Social Screening, Environment and Social Impact Assessment (ESIA) and ESMP and Resettlement Action Plan report as per the requirement.
- v) Conduct orientation for the Implementing agencies/ PIU staff on the Social Compliances of the project.
- vi) Prepare specific training calendar for the different theme-based trainings on site for all workmen on sites, and budget provision for complying with the training calendar.
- vii) Prepare relevant documents for the construction work to proceed in accordance with the Project ESMF, LMP and recommend update if necessary.
- viii) Other relevant tasks given by Program Manager or Program Manager of relevant PIU.

VIII. Required qualifications of the consultancy firm and key staff

1. Required consulting firm experience and qualifications:

| | |
|-----------|---|
| Required | Minimum of five (5) years of experience related to disaster risk management. |
| | Experience of designing and strategically planning disaster multipurpose shelters and workflow management. |
| | Availability of appropriate skills/experts among staff with demonstrated capacity to handle the proposed assignment in line with these terms of reference, including the availability of other resources, such as logistical, administrative, and support services of the firm. |
| | Valid registration and licenses, GST, and IT certificates, and audited financial reports for the last three years. |
| Desirable | Experience of working with EAP Projects such as World Bank-funded and/or other International Development Partner-funded projects. |
| | Experience of working with the Government of Uttarakhand and/or other state governments in India, mainly State Disaster Management Authorities/related to disaster. |



| | |
|--|---|
| | Experience of working with the Government of Uttarakhand and/or other state governments in India, mainly State Disaster Management Authorities/related to disaster. |
| | Experience with disaster risk management programs in Uttarakhand and/or other Indian Himalayan hill states. |
| | Established office in Dehradun completed or intention clarified in proposal. |

- Preference(s) will be given to those having an established office in Dehradun.

Note: Any firm convicted by a court or debarred by any government/private procuring entity or by any World Bank-funded project or blacklisted in India or abroad by any government entity is not eligible to apply.

2. Team expertise, composition, and location:

The key personnel will require expertise in disaster risk management, disaster shelters, geospatial analysis, stakeholder and community consultation, and social and environmental safeguards.

The consulting team is expected to include, at a minimum, the positions listed in Section 3 below. No deviation of the actual team composition from the members listed in the proposal is allowed without prior approval.

3. Staffing Schedule During Design Stage:

| Sr. No. | Key Expert | Design Stage | | | Total Man Month | Minimum Qualification & Experience |
|---------|-------------|---------------|--|-----------|-----------------|---|
| | | No. of expert | Required duration (each expert in Month) | Input | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Team Leader | 01 | 12 | Full Time | 12 | Education: Master's degree in disaster risk management or related field. Experience: 10 years of experience in leading research and analysis projects on disaster risk management. Experience of working in hilly areas in related field. |



| | | | | | | |
|---|---|----|----|--------------|----|--|
| 2 | Disaster risk management/shelter specialist | 01 | 12 | Full Time | 12 | <p>Education: Master's degree in a field related to disaster risk management.</p> <p>Experience: 5 years of experience in research and analysis projects on disaster risk management.</p> <p>Experience of working in hilly areas in related field.</p> |
| 3 | Geo-spatial analysis expert(s) | 01 | 12 | Full Time | 12 | <p>Education: Master's degree in geospatial analysis or related field.</p> <p>Experience: Significant practical experience in geospatial analysis or related field.</p> <p>Experience working with hazard/risk/vulnerability mapping and/or crowd/flow management in disaster situations.</p> |
| 4 | Structural Engineer | 01 | 12 | Intermittent | 09 | <p>Education: Master's degree in structural engineering or related field.</p> <p>Experience: 5 years of experience in design/structural engineering of civil construction activities.</p> <p>Experience working with disaster shelters and local building materials and typologies in the region.</p> <p>Experience in Seismic Design and analysis</p> <p>Experience of working in hilly areas in related field.</p> |
| 5 | Architect | 01 | 12 | Intermittent | 09 | <p>Education: B. Arch (Additional marks for master's degree).</p> <p>Experience: 5 years of experience in designing buildings/structures.</p> <p>Experience working with disaster shelters and local building</p> |



| | | | | | | materials and typologies in the region. Experience of working in hilly areas in related field. |
|---------|--|--------------|----|--------------|-----------------|--|
| 6 | Community engagement/social development specialist | 01 | 12 | Intermittent | 06 | Education: Master's in sociology/MSW or in related field Experience: 5 years in community and stakeholder engagement, social development, and social safeguards management. Experience working with disaster management, short-term shelter. |
| | | | | | | Experience of working with World Bank's Social Framework. Experience of working in hilly areas in related field. |
| 7 | Environmental management/safeguard specialist | 01 | 12 | Intermittent | 06 | Education: Master's degree in environmental sciences or related field Experience: 5 years in environment, health and safety management. Experience of working with World Bank's Environment Framework. Experience of working in hilly areas in related field. |
| Sr. No. | Non-Key Expert | Design Stage | | | Total Man Month | Minimum Qualification & Experience |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |



| | | | | | | |
|---|---------------------|----|----|--------------|----|--|
| 1 | Quantity Surveyor – | 01 | 12 | Intermittent | 06 | <p>Education: Graduate in Civil Engineering.</p> <p>Experience: Minimum 05 years post qualification experience in building construction as a quantity surveyor/Billing Engineer and completed Minimum 1 Govt. project as a quantity surveyor/Billing Engineer.</p> <p>Should have experience of completed minimum 1 Govt. project as a quantity surveyor/Billing Engineer.</p> |
| 2 | MEP Expert | 01 | 06 | Intermittent | 06 | Education: Graduate in Electrical Engineering/ E&M with minimum 05 years' experience in designing of MEP related works in building. |

IX. Consultancy firm's responsibilities

- Conduct and complete the consultancy as per the agreed TOR and scope of the consultancy.
- Ensure monthly presence in Uttarakhand or Client's office, including key staff to carry out required activities during the contract period to help continuous interaction with the client.
- Collect all necessary primary data, including surveys, geotechnical investigations of selected sites, hazard risk and vulnerability data, and community profiling.
- Collect all secondary data not supplied by the client.
- Conduct field visits etc. as required for data collection for need assessment.
- Propose a post-consultancy monitoring and exit plan.
- Maintain the reports and design models, developed under the consultancy, for a period of one year after acceptance.
- Ensure that USDMA will have Intellectual Property Rights for all documents.

X. Project and Payment Schedule

The payment schedule consists of two stages:

- 85% value of the lump-sum amount of contract bond for the design stage and
- the remaining 15% value of the lump-sum amount contract for implementation design support stage.

➤ Payment Schedule For Design Stage: (A=85% value of the contract bond)



| Task | Month | | | | | | | | | | | | Percentage Payment on Acceptance and Approval |
|--|---------------|---|---|---|---|---|---|---|---|----|----|----|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| D1 Assignment-level Reports | Task 1 | | | | | | | | | | | | |
| D1.1 Inception Report | 1 | | | | | | | | | | | | 5% of A |
| D1.2 Mid-term Report | 6 | | | | | | | | | | | | 5% of A |
| D1.3 Assignment Closing Report | 12 | | | | | | | | | | | | 5% of A |
| D2 Comprehensive disaster shelter needs assessment and shelter development plan | Task 2 | | | | | | | | | | | | |
| D2.1 Multipurpose Disaster Shelter Needs Assessment | 3 | | | | | | | | | | | | 10% of A |
| D2.2 State-level Shelter Strategy | 6 | | | | | | | | | | | | 5% of A |
| D2.3 Draft Shelter Policy | 8 | | | | | | | | | | | | 5% of A |
| D2.4 Draft Operational Plans for Multipurpose Shelters | 8 | | | | | | | | | | | | 10% of A |
| D3 Shelter Design | Task 3 | | | | | | | | | | | | |
| D3.1 Shelter Specifications and Design | 9 | | | | | | | | | | | | 10% of A |
| D3.2 Model Shelter DPRs | 10 | | | | | | | | | | | | 10% of A |
| D3.3 Site-specific DPRs for Pilot Shelters | 12 | | | | | | | | | | | | 25% of A |
| D4 Dissemination Package | Task 3 | | | | | | | | | | | | |
| D4.1 Open Access Documentation | 12 | | | | | | | | | | | | |
| D4.2 Set of Created Data and Methods Published in Open Access | 12 | | | | | | | | | | | | 10% of A |
| | | | | | | | | | | | | | 100% of A |

Note:

- a) All statutory deductions shall be done as per existing rule.
- b) Payment will be made of the deliverables as accepted by the client or competent authority.
- c) Total 10 nos. of DPRs for 10 proposed Shelters has to be prepared. If the number of DPRs shall be increased or decreased, the cost shall be calculated on a pro rata basis based on no. of DPRs.
- d) The above payment Milestones are subject to various deliverables apart from the ones stated in the table such as Quality Assurance Plan, Environment & Social Safeguard Plan etc.

➤ **Payment Schedule for Implementation Design Support Stage: (B=15 % value of the contract bond)**

- This 15% will be divided equally among 10 disaster shelters (i.e., 1.5% per shelter).

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- For each shelter, the 1.5% per shelter will be paid in 4 stages based on physical progress on Pro-Rata basis:

| S. No. | Deliverable/Milestone | Fee Payable |
|---|----------------------------------|-------------|
| 1 | 25% completion of physical work | 0.375% |
| 2 | 50% completion of physical work | 0.375% |
| 3 | 75% completion of physical work | 0.375% |
| 4 | 100% completion of physical work | 0.375% |
| Total Fee Payable Per Shelter | | 1.5% |
| Total Fee Payable for 10 Shelter(s) in the Implementation Stage | | 15% |

➤ Summary of Payment Breakdown

- 85% during the design stage
- 15% during implementation, split across 10 shelters
- Each shelter's 1.5% is further divided into 4 payments based on physical completion

Notes:

- All payments shall be subject to Income Tax deduction at source.
- Payment of fee as per the various stages of the above Payment Schedule shall generally be considered as due only when the entire work up to that stage is completed in all respects for all the buildings, structures, landscaping and external development, and service connections etc. as applicable for that stage of the work. However, intermediate payments on pro-rata basis shall be admissible for release to the consultant as per phasing / or stages mentioned above.
- Any changes in design required for successful completion of the objective(s) shall be covered in the above schedule and scope of design consultant without any additional cost to the Client.

XI. Government of Uttarakhand responsibilities

- Provide secondary data available to relevant Government departments and facilitate the collection of any other needed data from state and central agencies.
- Form various committees to facilitate the review of inputs from the consultancy firm promptly.
- Facilitate the implementation of the project with all stakeholders and other departments.



XII. Codes to be followed by the consultant include but are not limited to the following:

1. IS: 1893 (Part-1): 2016- Indian Standard Criteria for Earthquake Resistant Design of Structures
2. IS: 13920:2016- Ductile Detailing of Reinforced Concrete Structures Subjected to Seismic Forces-Code of Practice
3. IS 13935:2009 Seismic evaluation, Repair and strengthening of masonry buildings - Guidelines.
4. IS: 15988-2013- Seismic Evaluation and strengthening of existing reinforced concrete buildings-guidelines, BIS
5. IS: 4326:2013- Earthquake resistant design and construction of buildings-code of practice, BIS, New Delhi.
6. IS: 1905:1987- Indian standard code of practice for structural use of unreinforced masonry (Third revision), BIS, New Delhi.
7. IS 1786: High strength deformed steel bars and wires for concrete reinforcement
8. IS: 456 (Part-1):2000-Code of Practice for Plain and Reinforced Concrete
9. IS: 516:1959-Methods of tests for strength of concrete
10. IS 383: Specification for Coarse and Fine Aggregates
11. IS 13828:1993-Improving earthquake resistance of low strength buildings- guidelines
12. IS 1904-1986- Indian Standard Code of practice for Design & Construction foundations in Soil: General Requirements
13. NDMA Guidelines
14. UTK-GSDMA Suite for Seismic Evaluation and Strengthening of Building
15. IITK-GSDMA Review of Document on Seismic Evaluation Buildings of Existing
16. State Disaster Management Action Plan for Uttarakhand State.
17. IS 2131: 1981- Method for standard penetration test for soils.
18. IS 1077: 1992- Common Burnt Clay Building Bricks-Specification,
19. ASTM C1084-97- Standard Test Method for Portland-Cement Content of Hardened Hydraulic-Cement Concrete.
20. IS 3495:1992-Methods of tests of burnt clay building bricks.
21. IS 432(Part II): 2004- Specification for Mild Steel and Medium Tensile Steel Bars and Hard- Drawn Steel Wire for Concrete Reinforcement

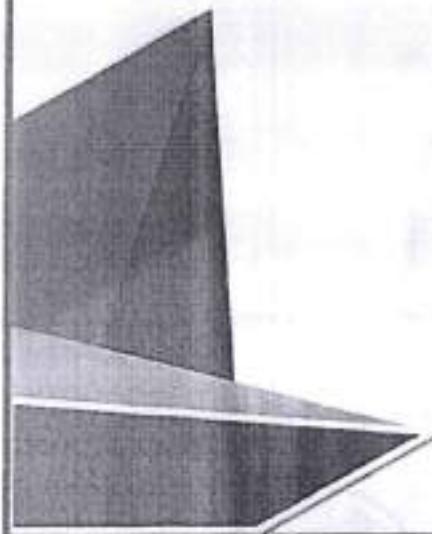
Note: All Detailed Progress Reports (DPRs) prepared under the contract shall be the exclusive property of the PIU-USDMA, U-PREPARE.





FORM TECH -6:

Team Composition, Assignment and Key Experts' Inputs



TEAM COMPOSITION, ASSIGNMENT AND KEY EXPERT'S INPUT

TECH - 6 (FOR FTP AND STP)

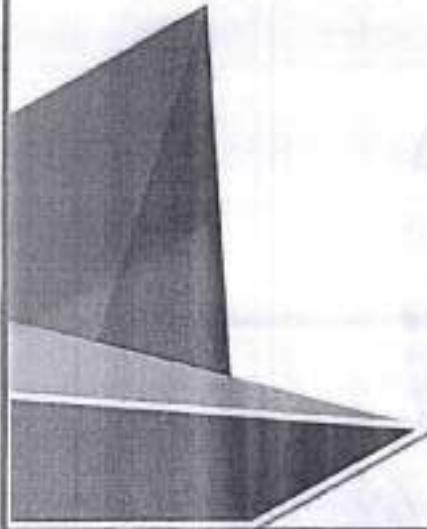
| No. | Name | Position | Expert's Input (in person/month) per each Deliverable (Listed in TECH-5) | | | | | Total time-input (in Months) | | |
|------------------------|-------------------------|--|--|-------|-------|-------|-------|---------------------------------|-------|--------|
| | | | D-1 | D-2 | D-3 | D-4 | D-5 | Home | Field | Total |
| KEY EXPERTS | | | | | | | | | | |
| K-1 | Dr. Ishwer Datt Gupta | Team Leader | Home | 2,500 | 2,000 | 0,250 | 1,000 | 9,250 | 2,750 | 12,000 |
| K-2 | Naren Kumar Malhar | Disaster Risk Management/Shelter Specialist | Field | 0,500 | 1,000 | 0,000 | 0,250 | | | |
| K-3 | Dr. Santosh Kumar Singh | Geo Spatial Analysis Expert | Home | 2,250 | 3,500 | 0,250 | 1,000 | 0,750 | 3,250 | 12,000 |
| K-4 | Vivek Sood | Structural Engineer | Field | 0,500 | 1,000 | 0,000 | 0,250 | | | |
| K-5 | Nishant Srivastava | Architect | Home | 0,500 | 0,500 | 6,000 | 0,250 | 8,250 | 0,750 | 9,000 |
| K-6 | Niraj Parashar | Community Engagement/Social Development Specialist | Home | 0,500 | 1,500 | 1,000 | 0,250 | 0,250 | 0,750 | 9,000 |
| K-7 | Akhtar Rasool Iftah | Environmental Management/Safeguard Specialist | Field | 0,500 | 1,000 | 0,300 | 0,250 | 4,250 | 1,750 | 6,000 |
| | | | | | | | | Sub Total | 53.25 | 12.75 |
| NON-KEY EXPERTS | | | | | | | | | | |
| NK-1 | Nirav Kumar | Quantity Surveyor | Home | 0,000 | 0,000 | 4,750 | 0,250 | 0,000 | 5,000 | 6,00 |
| NK-2 | Parth Sarthi | MEP Expert | Field | 0,000 | 2,500 | 2,000 | 0,250 | 0,000 | 5,000 | 6,00 |
| | | | | | | | | Sub Total | 10,00 | 2,00 |
| | | | | | | | | Total | 63.25 | 14.75 |
| | | | | | | | | | | 78,00 |





FORM TECH -6:

Curriculum Vitae (CV) -Attached





FORM TECH-6: CURRICULUM VITAE (CV)

| | |
|---|-----------------------|
| Position Title and No. | K-1-Team Leader |
| Name of Expert: | Dr. Ishwer Datt Gupta |
| Date of Birth: | 16 September 1953 |
| Country of Citizenship/Residence | Indian |

Education:

| Qualification | Institution | Duration |
|--|---|----------|
| Ph.D. in Physics, Topic: Risk Based Seismic Response Analysis of Structures – A Stochastic Approach | University of Pune | 1987 |
| M.S. in (Civil Engineering , Earthquake Engineering). | University of Southern California, Los Angeles, USA, | (1985), |
| M. Sc. In Physics. | University of Delhi | (1976), |
| B. Sc. In Mathematics | Panjab University, Chandigarh, Physics, Chemistry | (1974), |

Employment record relevant to the assignment:

| Period | Employing organization and your title/ position. Contact in for references | Location | Summary of activities performed relevant to the Assignment |
|-----------------------|--|----------------|--|
| Dec 2024-Till Date | Organization:- Pureways Infra Private Limited Position: - Team Leader | Delhi India | <ul style="list-style-type: none"> • Leading team of multi-disciplinary experts and staff members for various multipurpose projects in river valleys in various parts of India. • Strategic Planning & Coordination • Lead the formulation of Disaster Risk Reduction strategies tailored to the geographic and environmental vulnerabilities of Joshimath • Coordinate with multidisciplinary teams (survey engineers, Hydrologist, geologists, urban planners, GIS experts) for integrated risk assessment. • Ensure alignment with government regulations and NDMA (National Disaster Management Authority) guidelines. • Supervise and validate the comprehensive survey of terrain, infrastructure, soil conditions, and existing drainage systems. • Application of spatial analysis techniques, including GIS and remote sensing tools, to delineate high-risk geographies. • Preparation of detailed project reports (DPRs), |





| Period | Employing organization and your title/ position. Contact in for references | Location | Summary of activities performed relevant to the Assignment |
|---------------------------|---|----------|--|
| | | | feasibility assessments, and impact studies |
| Jul 2017- Nov 2024 | Organization: - Freelancing Position: - Independent Scholar | India | <ul style="list-style-type: none"> Identifying research gaps in public policy, disaster management, environmental planning, or development sectors. Designing and conducting field-based or desk-based studies, using qualitative and/or quantitative methods. Publishing findings in journals, policy briefs, reports, or presenting at conferences and seminars. Advocating for evidence-based policy changes, using data and analytical insights. Maintaining intellectual freedom to explore critical and innovative topics that institutional researchers might not pursue due to funding or political constraints. |
| January 2014 to June 2017 | Organization: - IIT Roorkee, Department of Earthquake Engineering Position: - Visiting Professor | India | <ul style="list-style-type: none"> Scientific Lead in Seismic Hazard Assessment Designed and guided methodologies for site-specific seismic hazard studies tailored to hydroelectric and oil terminal projects. Led ground motion modeling using both deterministic and probabilistic frameworks, including Probabilistic Seismic Hazard Assessment (PSHA). Evaluated active fault systems, tectonic regimes, and regional seismicity using physics-based models of crustal deformation Reviewed and validated hazard estimation models, such as Ground Motion Prediction Equations (GMPEs) appropriate for local and regional tectonics. Ensured scientific rigor in the estimation of: <ul style="list-style-type: none"> Peak Ground Acceleration (PGA) Spectral Acceleration (SA) Site-specific response spectra Provided expert analysis on site amplification, soil-structure interaction, and depth-to-bedrock evaluations Integrated recent peer-reviewed seismic research, empirical data, and geophysical models into the project framework. Developed or adapted region-specific seismic source models, including magnitude-recurrence relationships and fault rupture parameters. Collaborated in the development and calibration of seismic hazard models using international tools like OpenQuake or CRISIS. |





| Period | Employing organization and your title/ position. Contact in for references | Location | Summary of activities performed relevant to the Assignment |
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| 1979 to September 2013 | <p>Organization: - Central Water and Power Research Station, Pune</p> <p>Position: - Director (2009 to September 2013) Additional Director (February 2009 to July 2009) Joint Director</p> <p>(December 1998 to February 2009) Chief Research Officer (September 1991 to December 1998) Senior Research Officer (January 1985 to September 1991) Research Officer (September 1979 to December 1984)</p> | India | <ul style="list-style-type: none"> Directed and oversaw a wide array of site-specific seismic hazard assessments, dynamic response analyses, and probabilistic ground motion estimations for hydroelectric, irrigation, and nuclear infrastructure. Led formulation of project methodologies, integrating global best practices with regional seismotectonic characteristics. Guided the integration of physics-based modeling, engineering seismology, and non-destructive testing into structural evaluations. Projects under the Director's leadership covered: <ul style="list-style-type: none"> Major dam and hydroelectric projects (e.g., Mullaperiyar, Middle Vaitarna, Tawang, Teesta, Arun-III, Dagachhu). Cross-border power infrastructure in Bhutan, Nepal, and Myanmar. Strategic infrastructure like nuclear power plants (e.g., Kudankulam NPP). River-linking and pumped storage schemes (e.g., Damanganga-Pinjal, Par-Tapi-Narmada). Reviewing and approving seismic input parameters: PGA, spectral acceleration, Uniform Hazard Spectra (UHS), DBE, MCE. Overseeing microseismic network design and data analysis for long-term seismic monitoring (e.g., Indira Sagar, Pancheswar). |

Membership in Professional Associations and Publications:

- Institution of Engineers (India), Civil Engineering Division, since 1987
- Indian Society for Earthquake Technology, since 1988
- Indian Society for Rock Mechanics and Tunnelling Technology, since 1992
- Indian Society for Hydraulics, since 2001
- Indian Society of Earthquake Science, since 2013

Language Skills (indicate only languages in which you can work):

| Languages | Speaking | Reading | Writing |
|-----------|----------|-----------|-----------|
| English | Fluent | Excellent | Excellent |
| Hindi | Fluent | Excellent | Excellent |

Adequacy for the Assignment:

| S. No | Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks |
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| 1. | <p>Assignment Name: Engaging Consulting Services for Preparation of Detailed Project Report for Preparation of Drainage Plan for Joshimath Town, Chamoli, Uttarakhand</p> <p>Client – Uttarakhand Peyjal Sansathan Vikas Evam Nirman Nigam</p> <p>Position held: Team Leader</p> <p>Location: Uttarakhand</p> <p>Duration: Dec 2024 to May 2025</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Leading team of multi-disciplinary experts and staff members for various multipurpose projects in river valleys in various parts of India.• Strategic Planning & Coordination• Lead the formulation of Disaster Risk Reduction strategies tailored to the geographic and environmental vulnerabilities of Joshimath• Coordinate with multidisciplinary teams (survey engineers, Hydrologist, geologists, urban planners, GIS experts) for integrated risk assessment.• Ensure alignment with government regulations and NDMA (National Disaster Management Authority) guidelines.• Supervise and validate the comprehensive survey of terrain, infrastructure, soil conditions, and existing drainage systems.• Application of spatial analysis techniques, including GIS and remote sensing tools, to delineate high-risk geographies.• Preparation of detailed project reports (DPRs), feasibility assessments, and impact studies |
| 2. | <p>Assignment Name:</p> <ul style="list-style-type: none">• Estimation of site-specific design seismic parameters for Upper and Lower dam sites of the Gandikota Pumped Storage Project (PSP), YSR (Kadapa) Districts, Andhra Pradesh, 04/2025• An updated study report on site-specific seismic hazard studies for Tarali Pumped Storage Project (PSP), Satara District, Maharashtra, 03/2025• Estimation of site-specific design seismic parameters for Koyna Nivakane Pumped Storage Project (PSP), District Satara, Maharashtra, 01/2025• Estimation of site-specific design seismic parameters for Upper and Lower Dam sites of the Shirawta Pumped Storage Project (PSP), District Pune, Maharashtra, 12/2024• An Updated Study Report on Estimation of site-specific seismic design parameters for the Jiadhal Dam Project in the state of Arunachal Pradesh, 12/2024• Estimation of Site-Specific Seismic Design Parameters for the Existing Thokarwadi Upper Reservoir Dam Site of the Bhilvpuri Pumped Storage Project (PSP), Maharashtra State, 11/2024• Estimation of site-specific earthquake parameters for Bhandardara dam, Maharashtra State, 10/2024.• An updated study report on estimation of site-specific design earthquake parameters for Sukhpura Off-Stream Closed Loop Pumped Storage Project (OCPSP), Chittorgarh District, Rajasthan State, 09/2024• An updated study report on estimation of site-specific design earthquake parameters for Shahpur Standalone Pumped Storage Project (PSP), Baran District, Rajasthan State, 09/2024• An updated study report on estimation of site-specific seismic design parameters for Saundatti Pumped Storage Project (PSP), Karnataka State, 09/2024• Estimation of site-specific seismic design parameters for Vempalli Off-Stream ClosedLoop Pumped Storage Project, YSR Kadapa District, Andhra Pradesh, 04/2024• Estimation of site-specific seismic design parameters for lower dam site of the Bhilvpuri Pumped Storage Project (PSP), Raigad District, Maharashtra State, 03/2024• A report on site-specific seismic hazard studies for Warasgaon-Warangli Pump Storage Project (PSP), Pune and Raigad Districts, Maharashtra, 02/2024 |





- Estimation of site-specific seismic design parameters for the Jiadhal Dam Project in the state of Arunachal Pradesh, 02/2024
- Probabilistic fault displacement hazard analysis (PFDHA) for estimation of permanent surface displacement around Song Dam site, Dehradun District, Uttrakhand State, 01/2024 (Funded by World Bank)
- A report on site-specific seismic hazard studies for Tarali Pump Storage Project (PSP), Satara district, Maharashtra, 08/2023
- Estimation of site-specific design earthquake parameters for Sukhpura Off-Stream Closed Loop Pumped Storage Project (OCPSP), Chittorgarh district, Rajasthan state, 08/2023
- Estimation of site-specific design earthquake parameters for Shahpur Standalone Pumped Storage Project (PSP), Baran district, Rajasthan state, 06/2023
- Estimation of site-specific seismic design parameters for Singanamala Pumped Storage Project (PSP), Ananthapurmu District, Andhra Pradesh, 02/2023. A Report on Site-Specific Seismic Hazard Studies for Kurukutti-Pumped-Storage-Project (PSP) Cluster, Vizianagaram District, Andhra Pradesh, 09/2022.
- Estimation of site-specific seismic design parameters for Chitravathi Pumped Storage Project (PSP), Ananthapurmu District, Andhra Pradesh State (08/2022).
- Probabilistic Fault Displacement Hazard Analysis (PFDHA) for Estimation of Permanent Surface Displacement around Jamrani Dam Site, Nainital District, Uttrakhand State, 07/2022. (Funded by world Bank)
- Estimation of site-specific design earthquake parameters for MP 3D Gandhisagar Pumped Storage Project (PSP), Neemuch District, Madhya Pradesh State, 06/2022.
- Estimation of site-specific seismic design parameters for Jamrani dam project, Nainital District, Uttrakhand State, 05/2022. (World Bank Funded)
- Seismic Hazard Assessment for Kalpasar dam, Gujarat, 05/2022. (World Bank Funded)
- Estimation of site-specific seismic design parameters for Simsang dam project, East Garo Hills District, Meghalaya state, 02/2022. (World Bank Funded)
- Report on probabilistic seismic hazard analysis (PSHA) for Jeddah South Container Terminal Upgrade, Kingdom of Saudi Arabia, 10/2021. (World Bank Funded)
- Site-specific design earthquake parameter study for Standalone Pinnapuram Pumped Storage Project, Kurnool, Andhra Pradesh, India, 11/2019.
- A report on site-specific seismic hazard studies for Trisha-Thoise Hydroelectric Project, Leh District, Jammu and Kashmir, 10/2018. (World Bank Funded)
- Report on seismic hazard analysis for Mumbai Trans Harbour Link, 04/2018.

Client – Various Departments

Position held: Independent Scholar

Location: Various Locations

Duration: Jul 2017 – Nov 2024

Responsibilities:

- Maintaining intellectual freedom to explore critical and innovative topics that institutional researchers might not pursue due to funding or political constraints.
- Development of evidence-based project frameworks incorporating logic models, theories of change, and climate-resilient infrastructure planning.
- Preparation of detailed project reports (DPRs), feasibility assessments, and socio-environmental impact studies.
- Integration of traditional ecological knowledge and local practices within modern DRM strategies.
- Cost-benefit analysis and risk prioritization to optimize resource allocation for sustainable outcomes



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| | <ul style="list-style-type: none">• Development and application of monitoring and evaluation (M&E) frameworks with defined indicators and benchmarks.• Periodic data collection and field audits to assess the effectiveness of implemented strategies.• Compilation of technical documentation, progress evaluations, and dissemination of findings through academic and policy platforms.• Identifying research gaps in public policy, disaster management, environmental planning, or development sectors.• Designing and conducting field-based or desk-based studies, using qualitative and/or quantitative methods.• Publishing findings in journals, policy briefs, reports, or presenting at conferences and seminars.• Advocating for evidence-based policy changes, using data and analytical insights. |
| 3. | <p>Assignment Name:</p> <ul style="list-style-type: none">• Estimation of site-specific seismic design parameters for Nafra Hydroelectric Project site, West Kameng district, Arunachal Pradesh, 06/2016.• A report on probabilistic seismic hazard assessment (PSHA) for Jebel Ali ENOC site at Dubai, United Arab Emirates, 12/2016• Report on probabilistic seismic hazard assessment (PSHA) - Ras Al Markaz Oil Terminal, for Oman Tank Terminal Company (OTTCO) Ras Markaz, Sultanate of Oman, 10/2015• Estimation of site-specific design seismic parameters for Morand Dam Project, Madhya Pradesh, 08/2015• Estimation of site-specific design seismic parameters for Ganjal Dam Project, Madhya Pradesh, 08/2015• Estimation of site-specific design earthquake parameters for Tsachu-II Hydroelectric Project site, Tawang district, Arunachal Pradesh, 05/2014• Estimation of site-specific design earthquake parameters for Tsachu-I Lower Hydroelectric Project site, Tawang district, Arunachal Pradesh, 05/2014• Estimation of site-specific design earthquake parameters for Tsachu-I Hydroelectric Project site, Tawang district, Arunachal Pradesh, 05/2014• Estimation of site-specific design earthquake parameters for Pachuk-II Lower Hydroelectric Project site, East Kameng district, Arunachal Pradesh, 05/2014• Estimation of site-specific design earthquake parameters for Pachuk-II Hydroelectric project site, East Kameng district, Arunachal Pradesh, 05/2014• Estimation of site-specific design earthquake parameters for Pachuk-I Hydroelectric Project site, East Kameng district, Arunachal Pradesh, 04/2014. Estimation of site-specific design earthquake parameters for Marginila Lower Hydroelectric Project site, East Kameng district, Arunachal Pradesh, 04/2014• Estimation of site-specific design earthquake parameters for Marginila Hydroelectric Project site, East Kameng district, Arunachal Pradesh, 04/2014• Estimation of site-specific design earthquake parameters for Pakke Bung-II Hydroelectric Project site, East Kameng district, Arunachal Pradesh, 04/2014• Estimation of site-specific design earthquake parameters for Pakke Bung-III Hydroelectric Project site, East Kameng district, Arunachal Pradesh, 03/2014• Estimation of site-specific design earthquake parameters for Pakke Bung-IV Hydroelectric Project site, East Kameng district, Arunachal Pradesh, 03/2014• Estimation of site-specific design earthquake parameters for Pakke Bung-I Hydroelectric Project site, East Kameng district, Arunachal Pradesh, 03/2014 |

Client – Various Departments



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| | <p>Position held: Visiting Professor Location: Various Departments Duration: Jan 2014 – Jun 2017 Responsibility:</p> <ul style="list-style-type: none">• Scientific Lead in Seismic Hazard Assessment• Designed and guided methodologies for site-specific seismic hazard studies tailored to hydroelectric and oil terminal projects.• Led ground motion modeling using both deterministic and probabilistic frameworks, including Probabilistic Seismic Hazard Assessment (PSHA).• Evaluated active fault systems, tectonic regimes, and regional seismicity using physics-based models of crustal deformation• Reviewed and validated hazard estimation models, such as Ground Motion Prediction Equations (GMPEs) appropriate for local and regional tectonics.• Ensured scientific rigor in the estimation of:<ul style="list-style-type: none">• Peak Ground Acceleration (PGA)• Spectral Acceleration (SA)• Site-specific response spectra• Provided expert analysis on site amplification, soil-structure interaction, and depth-to-bedrock evaluations• Integrated recent peer-reviewed seismic research, empirical data, and geophysical models into the project framework.• Developed or adapted region-specific seismic source models, including magnitude-recurrence relationships and fault rupture parameters.• Collaborated in the development and calibration of seismic hazard models using international tools like OpenQuake or CRISIS. |
| 4. | <p>Assignment Name:</p> <ul style="list-style-type: none">• Estimation of site-specific design seismic parameters for P.V. Narasimha Rao Kanthanapalli Sujala Sravanti Project, Telangana state, 12/2013• Estimation of site-specific seismic design parameters for Teesta Low Dam I & II combined Hydroelectric Project, West Bengal, CWPRS Report No. 5012 of 10/2012• Estimation of site-specific seismic design parameters for Teesta Intermediate Hydroelectric Project, West Bengal, CWPRS Report No. 5011 of 10/2012• Estimation of site-specific seismic design parameters for Dagmara HE projects, Bihar, CWPRS Report No. 4957 of 06/2012• Dynamic response analysis of Mullaperiyar dam using material properties based on testing of core samples, CWPRS Report No. 4950 of 04/2012• Non-destructive testing for Block No. 11 of Mullaperiyar dam by sonic wave transmission method, CWPRS Report No. 4946 of 04/2012• Estimation of site-specific seismic design ground motion for Lower Orr Dam, M.P., CWPRS Report No. 4945 of 04/2012• Estimation of site-specific design parameters for Suntaley HE projects in East Sikkim, CWPRS Report No. 4934 of 03/2012• Estimation of site-specific seismic design ground motion for Kirthal H.E. Project Stage II, J&K, CWPRS Report No. 4923 of 02/2012• Estimation of site-specific seismic design parameters for Wangchu Hydro Electric Project, Bhutan, CWPRS Report No. 4915 of 01/2012 |



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- Estimation of site-specific seismic design parameters for Dwarakeswar-Gandheswari Irrigation project, West Bengal, CWPRS Report No. 4912 of 01/2012
- Dynamic response analysis of Mulla Periyar Dam, CWPRS Report No. 4910 of 12/2011
- Estimation of site-specific seismic design parameters for Arun-III Hydro Electric project, Nepal, CWPRS Report No. 4908 of 12/2011
- Seismic study for the proposed Shwezaye H.E. Project, CWPRS Report No. 4902, of 11/2011
- Micro earthquake studies at and around Pancheshwar dam site, Uttarakhand, CWPRS Report No. 4901 of 11/2011
- Estimation of site-specific seismic design parameters for Kuri-Gongri Hydro Electric project, Bhutan, CWPRS Report No. 4893 of 10/2011⁶⁴. Estimation of site-specific seismic design parameters for Chamkharchu Stage-I Hydro Electric project, Bhutan, CWPRS Report No. 4892 of 10/2011)
- Estimation of site-specific design ground motion for Tamanti Hydroelectric Project, Myanmar, CWPRS Report No. 4869 of 08/2011
- Seismological studies for Bunakha Hydro Electric Project, Bhutan for the period October 2010 - May 2011, CWPRS Report No. 4868 of 08/2011
- Estimation of site-specific design seismic parameters for Kalez Khola Hydroelectric Project, Sikkim, CWPRS Report No. 4856 of 07/2011
- Estimation of site-specific seismic design parameters for Amochu Reservoir H.E. Project, Bhutan, CWPRS Report No. 4849 of 06/2011
- Estimation of site-specific design ground motion for Par-Tapi Narmada link Project, CWPRS Report No. 4848 of 06/2011
- Estimation of site-specific design ground motion for Dernanganga-Pinjal link Project, CWPRS Report No. 4847 of 06/2011
- Analysis and interpretation of local seismological data recorded in the area of Indira Sagar Project, Madhya Pradesh during 1995-2009, CWPRS Report No. 4822 of 04/2011
- Estimation of site-specific design ground motion for Humbarli Pumped Storage Scheme, Maharashtra, CWPRS Report No. 4773 of 09/2010
- Microearthquake studies at and around Harangi Project, Karnataka, CWPRS Report No. 4767 of 08/2010
- Dynamic Response Analysis of Middle Vaitarna Dam, Maharashtra, CWPRS Report No. 4760 of 07/2010
- Estimation of site-specific design ground motion for Dagachhu Hydro Power Project, Bhutan, CWPRS Report No. 4747 of 06/2010
- Estimation of site-specific design parameters for Mandhan Nallah dam site, Madhya Pradesh, CWPRS Report No. 4722 of 03/2010
- Estimation of site-specific design ground motion for Tawang H.E. Project Stage I and II, Arunachal Pradesh, CWPRS Report No. 4686 of 01/2010
- Estimation of site-specific design ground motion for Kudankulam Nuclear Power Plant, Tamil Nadu, CWPRS Report No. 4685 of 12/2009
- Estimation of site-specific design seismic ground motion for Mapang and Bogudiya Hydroelectric Project, Uttarakhand, CWPRS Report No. 4671 of 11/2009
- Estimation of Site-Specific Design Ground Motion for Malshej Ghat pumped Storage Scheme, Maharashtra, CWPRS Report No. 4652 of 09/2009

Client – Various Departments

Position held: Director

Location: Various Locations

Duration: Aug 2009 – Sept 2013

Responsibilities:





- Directed and oversaw a wide array of site-specific seismic hazard assessments, dynamic response analyses, and probabilistic ground motion estimations for hydroelectric, irrigation, and nuclear infrastructure.
- Led formulation of project methodologies, integrating global best practices with regional seismotectonic characteristics.
- Guided the integration of physics-based modeling, engineering seismology, and non-destructive testing into structural evaluations.
- Projects under the Director's leadership covered:
- Major dam and hydroelectric projects (e.g., Mullaperiyar, Middle Veltarna, Tawang, Teesta, Arun-III, Dagachhu).
- Cross-border power infrastructure in Bhutan, Nepal, and Myanmar.
- Strategic infrastructure like nuclear power plants (e.g., Kudankulam NPP).
- River-linking and pumped storage schemes (e.g., Damanganga-Pinjal, Par-Tapi-Narmada).
- Reviewing and approving seismic input parameters: PGA, spectral acceleration, Uniform Hazard Spectra (UHS), DBE, MCE.
- Overseeing microseismic network design and data analysis for long-term seismic monitoring (e.g., Indira Sagar, Pancheshwar).

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| 5. | <p>Assignment Name: Estimation of site-specific design seismic ground motion for 300 MW coal-based group captive power plant at Butibori, Maharashtra, CWPRS Report No. 4620 of 03/2009</p> <p>Client – Various Departments</p> <p>Position held: Additional Director</p> <p>Location: Maharashtra</p> <p>Duration: Feb 2009 – Jul 2009</p> <p>Responsibilities:</p> <ul style="list-style-type: none">Led the formulation and execution of the methodology for estimating site-specific seismic design parameters, tailored to the power plant's structural and operational characteristics.Directed the use of both deterministic and probabilistic seismic hazard analysis (DSHA & PSHA) to derive reliable ground motion parameters, considering local and regional tectonic settings.Oversaw the selection and application of ground motion prediction equations (GMPEs) appropriate for the seismotectonic context of Central India.Supervised the development of a comprehensive seismic source model, identifying active faults, lineaments, and historical seismicity within a 300 km radius of the Butibori site.Ensured the integration of regional geological and tectonic data, enhancing the accuracy of site-specific hazard estimation. |
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| 6. | <p>Assignment Name:</p> <ul style="list-style-type: none">Estimation of site-specific design seismic ground motion for Gundia Hydroelectric project, Karnataka, CWPRS Report No. 4593 of 12/2008Estimation of site-specific design ground motion for Sankosh Multipurpose project, Bhutan, CWPRS Report No. 4592 of 12/2008Analysis and interpretation of local seismological data recorded in the area of Indira Sagar Project, Madhya Pradesh during the period 1995-2004, CWPRS Report No. 4589 of 12/2008Estimation of site-specific design seismic ground motion for dynamic analysis of Matatila dam, Uttar Pradesh, CWPRS Report No. 4575 of 09/2008Estimation of site-specific design seismic ground motion for Halon project, Madhya Pradesh, CWPRS Report No. 4555 of 05/2008A report on the microearthquake studies around Almatti and Narayanpur reservoirs, Karnataka of Period: 01.01.2001 to 31.12.2005, CWPRS Report No. 4554 of 05/2008 |
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- Estimation of site-specific design seismic parameters for Upper Valtarna Project, Maharashtra, CWPRS Report No. 4542 of 03/2008
- A report on controlled blast studies for Kakrapara Atomic Power Project Units 3&4, Gujarat, CWPRS Report No. 4524 of 02/2008
- Seismological studies for Tala H.E. project, Bhutan for the period January 2005 to December 2006, CWPRS Report No. 4523 of 02/2008
- Ultrasonic nondestructive testing for assessing the quality of concrete and depth of cracks in spillway pier caps of Upper Kolab Dam, Orissa, CWPRS Report No. 4509 of 12/2007
- Estimation of site-specific design seismic ground motion for Mankulam H.E. Project, Kerala, CWPRS Report No. 4485 of 09/2007
- Dynamic response analysis of Kolkewadi dam, Maharashtra, CWPRS Report No. 4481 of 09/2007 Nondestructive testing of stilling basin of Sardar Sarovar project, Gujarat, CWPRS Report No. 4479 of 08/2007
- Estimation of site-specific design seismic parameters for Teesta Hydroelectric Project, Stage-VI, Sikkim, CWPRS Report No. 4456 of 06/2007
- Estimation of site-specific design seismic ground motion for Upper Narmada project, Madhya Pradesh, CWPRS Report No. 4451 of 05/2007
- Estimation of site-specific design seismic parameters for Kelo dam project, Chhattisgarh, CWPRS Report No. 4444 of 04/2007
- Estimation of site-specific design seismic parameters for Pench diversion project, Madhya Pradesh, CWPRS Report No. 4440 of 04/2007 Estimation of site-specific design seismic parameters for
- preparation of DPR for Bauras, Hoshangabad and Handia projects, Madhya Pradesh, CWPRS Report No. 4403 of 12/2006
- Estimation of site-specific design seismic parameters for Sapta Kosi High Dam Multipurpose project and Sun Kosi Storage-cum-Diversion Scheme, Nepal, CWPRS Report No. 4394 of 11/2005
- Seismological studies for Sankosh H.E. Project, Bhutan of January 1997 to September 2003), CWPRS Report No. 4370 of 09/2006
- Vibration studies for assessing the safety of road cum rail bridge and the piers of the Farakka Barrage, West Bengal, CWPRS Report No. 4345 of 06/2006
- Estimation of site-specific design seismic parameters for Dibang Multipurpose Project, Arunachal Pradesh using probabilistic approach, CWPRS Report No. 4337 of 05/2006
- Estimation of site-specific design seismic parameters for Seli and Raoli Hydroelectric Projects, Himachal Pradesh, CWPRS Report No. 4333 of 05/2006
- Estimation of Site-Specific Design Seismic Parameters for Punatsangchhu Hydro Electric Project, Bhutan, CWPRS Report No. 4315 of 03/2006
- Design Seismic Parameters for Salma Project, Afghanistan, CWPRS Report No. 4287 of 12/2005
- Seismological Studies for Tala H.E. Project for the Period January 2004 to December 2004, CWPRS Report No. 4280 of 10/2005)
- Estimation of site-specific design seismic parameters for Rangit Hydro Electric Project, Sikkim, CWPRS Report No. 4277 of 10/2005
- Dynamic Response Analysis of Concrete Dam of Myntdu-Leshka H.E. Project, Meghalaya, CWPRS Report No. 4268 of 09/2005
- Evaluation of Site-specific Design Seismic Parameters for Srinagar Hydro Electric Project Site, Uttarakhand, CWPRS Report No. 4228 of 04/2005
- Seismological Studies for Teesta H.E. Project, Stage-VI Sikkim, for the period September 1998 to December 2003, CWPRS Report No. 4222 of 03/2005
- Estimation of Site-Specific Design Seismic Parameters for Lower Gai Project, Madhya Pradesh, CWPRS



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| <p>Report No. 4189 of 12/2004</p> <ul style="list-style-type: none"> • Estimation of Site-Specific Design Seismic Parameters for Earthquake Resistant Design of Kutni Dam, Madhya Pradesh, CWPRS Report No. 4182 of 11/2004 • A Report on Estimation of Safe Charges and Blasting Patterns for Excavation of Rock at PFBR Site, Kalpakkam, Tamil Nadu, CWPRS Report No. 4169 of 10/2004 • Estimation of Site-Specific Design Seismic Parameters for Upper Beda Project, Madhya Pradesh, CWPRS Report No. 4159 of 09/2004 • Seismological Studies for Tala H.E. Project for the Period January 2002 to December 2003, CWPRS Report No. 4158 of 09/2004 • Estimation of Site-Specific Ground Motion for Earthquake Resistant Design of Earthen Embankments of Kutch Branch Canal, Gujarat, CWPRS Report No. 4157 of 09/2004 • Estimation of Site-specific Design Seismic Parameters for Pulichintala H.E. Project, Andhra Pradesh, CWPRS Report No. 4087 of 03/2004 • A Report on the Estimation of Safe Charges and Design of Blasting Pattern for Excavation of Rock and the Overlying Concrete for Strengthening of the Overflow Section of Koyna Dam, Maharashtra, CWPRS Report No. 4081 of 03/2004 • A Report on Controlled Blast Studies for Rajasthan Atomic Power Project Units 5 & 6, Rajasthan, CWPRS Report No. 4052 of 12/2003 • Evaluation of RIS Potential of the Reservoirs Around Kaiga Atomic Power Plant Site, Karnataka, CWPRS Report No. 4033 of 08/2003 • Estimation of Site-Specific Design Seismic Parameters for Earthquake Resistant Design of Various Structures of Maledi Hydroelectric Projects, Goa, CWPRS Report No. 4019 of 07/2003 • Estimation of Site-specific Ground Motion for Earthquake Resistant Design of Pagladiya Dam Project, Assam, CWPRS Report No. 3972 of 03/2003 • Estimation of Design Seismic Ground Motion for Vindhya Chal STPP, Stage-III, Madhya Pradesh, CWPRS Report No. 3961 of 01/2003 • Evaluation of Site-specific Design Earthquake Ground Motion for the Dynamic Analysis of Koyna Dam, Maharashtra, CWPRS Report No. 3949 of 12/2002 • Estimation of Site-specific Design Parameters for Dynamic Analysis of Rihand Dam, Uttar Pradesh, CWPRS Report No. 3931 of 10/2002 • A Report on the Microearthquake Studies at and Around Harangi Project Site, Karnataka, CWPRS Report No. 3925 of 09/2002 • A Report on Evaluation of Safe Charges for Excavation of Rock at the Site of Units 3 & 4 of Kaiga Atomic Power Project, Karnataka, CWPRS Report No. 3912 of 08/2002 • Estimation of Dynamic Modulus of Elasticity for the Concrete and the Foundation Rock of Koyna Dam, Maharashtra, CWPRS Report No. 3911 of 08/2002 • A Report on the Microearthquake Studies Around Almatti and Narayanpur Reservoirs, Karnataka of Period: 01.01.1996 to 31.12.2000, CWPRS Report No. 3901 of 07/2002 • Microearthquake Studies for Investigation of Induced Seismicity in Itezhi Tezhi Reservoir Area, Zambia During the Period May 1987 to March 1993, CWPRS Report No. 3899 of 07/2002 • A Report on the Seismological Studies for Tala H.E. Project, Bhutan for the period January 1998 to December 2001, CWPRS Report No. 3889 of 06/2002 • An Updated Estimation of Design Seismic Ground Motion for Pancheshwar Multipurpose Project, Uttarakhand State, CWPRS Report No. 3871 of 04/2002 • A Report on the Vibration Studies Conducted for Evaluation of Safe Charges for Excavation of Rock at Kudankulam Nuclear Power Plant Site, Tamil Nadu, CWPRS Report No. 3854 of 02/2002 • A Report on Microearthquake Studies at and around Polavaram Project Site, Andhra Pradesh, CWPRS |
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| | <p>Report No. 3807 of 07/2001</p> <ul style="list-style-type: none">Non-Destructive Sonic Wave Studies to Evaluate the In-Situ Quality of the Masonry of Ujjani Dam, Maharashtra, CWPRS Report No. 3799 of 06/2001Estimation of Site-Specific Ground Motion for Earthquake Resistant Design of Flat Bay Barrage, Port Blair, South Andaman Island, CWPRS Report No. 3782 of 04/2001Estimation of Seismic Design Parameters for Teesta H.E. Project, Stage-II, Sikkim, CWPRS Report No. 3748 of 12/2000Generation of Site Specific Accelerograms for Dynamic Analysis of Laky Dam, Karnataka, CWPRS Report No. 3738 of 11/2000An Updated Estimation of Design Seismic Ground Motion for Tala H.E. Project, Bhutan, CWPRS Report No. 3690 of 03/2000 <p>Client – Various Departments Position held: Joint Director Location: Various Location Duration: Dec 1998 – Feb 2009</p> <p>Responsibilities:</p> <ul style="list-style-type: none">Site-specific seismic hazard assessments (PSHA & DSHA)Dynamic response analyses of critical dam infrastructureSeismological monitoring and induced seismicity studiesControlled blast safety studies for nuclear and hydropower infrastructureNon-destructive material evaluations of large civil structuresThis role combined deep technical expertise in applied physics and structural dynamics with high-level oversight of project execution, client coordination, and institutional research output.Peak Ground Acceleration (PGA)Uniform Hazard Spectra (UHS)Site-specific time historiesDynamic soil-structure interaction (SSI) parametersLed the development of regional seismotectonic models, including fault characterization and historical earthquake catalogues. |
| 7. | <p>Assignment Name:</p> <ul style="list-style-type: none">Evaluation of Site-Specific Design Earthquake Ground Motion for Teesta Hydel Project, Stage-VI, Sikkim, CWPRS Report No. 3553 of 11/1998Evaluation of Design Seismic Parameters for Tungabhadra Dam, Karnataka, CWPRS Report No. 3549 of 10/1998A Report on Seismological Studies at Almatti Project, Karnataka State for the Period from 01.01.1990 to 31.12.1995, CWPRS Report No. 3536 of 08/1998A Report on Controlled Blast Carried Out for Excavation of Right Bank Canal for Karanja Project, Karnataka, CWPRS Report No. 3488 of 03/1998Evaluation of Site-Specific Design Accelerograms for Warna Dam Site, Maharashtra, CWPRS Report No. 3383 of 12/1996A Study on Probabilistic Seismic Zoning of Maharashtra State, Maharashtra, CWPRS Report No. 3382 of 12/1996Non-Destructive Sonic Wave Studies to Evaluate the Quality of Masonry of LowerTerna Dam, Maharashtra, CWPRS Report No. 3243 of 05/1995Analysis of the Koyna Dam Accelerograms Recorded from 1st February 1994 Earthquake, CWPRS Report No. 3214 of 01/1995 |





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| | <ul style="list-style-type: none">An Evaluation of Site-Specific Input Accelerogram for Dynamic Response Analysis of Srisailam Dam, Andhra Pradesh, CWPRS Report No. 3211 of 01/1995151. Blast Studies to Evaluate the Safe Charges for Approach Canal and Power House Excavations at Brindavan Hydel Project, KPCL, Mysore, CWPRS Report No. 3208 of 1995Evaluation of Design Earthquake Response Spectra for Sankosh Multi-Purpose Project, Bhutan, CWPRS Report No. 3167 of 07/1994Design Earthquake Response Spectra for Pancheshwar Dam Project - A Preliminary Estimate, CWPRS Report No. 3125 of 03/1994A Preliminary Evaluation of Design Earthquake Spectra for Tala and Wangchu Projects, Bhutan, CWPRS Report No. 3079 of 07/1993Assessment of Safe Charges for Excavation of Dam Site Power House at Almatti, Karnataka, CWPRS Report No. 3063 of 1993Blast Vibration Studies at Singur Dam Power-House Site, A.P., CWPRS Report No. 3021 of 12/1992Blast Vibration Studies to Evaluate the Safe Charges for Excavation of Rock on Down Stream of Flip-Buck Jet at Dhamni Dam, Surya Project, Maharashtra, CWPRS Report No. 3002 of 09/1992A Report on Designing of the Blasting Pattern for Dismantling of Existing Weir on Upstream of New Mahanadi Barrage, Orissa, CWPRS Report No. 2980 of 1992Evaluation of Design Seismic Parameters for Dynamic Response Analysis of Jhuj Dam, Gujarat, CWPRS Report No. 2979 of 06/1992Report on Vibration Studies Carried out During Excavation of Adits at Srisailam Left Bank Project, APSEB, A.P., CWPRS Report No. 2920 of 1991 |
| | <p>Client – Various Departments</p> <p>Position held: Chief Research Officer</p> <p>Location: Various Locations</p> <p>Duration: Sept 1991 -Dec 1998</p> <p>Responsibilities:</p> <ul style="list-style-type: none">Formulating methodologies for site-specific ground motion estimation using deterministic and probabilistic seismic hazard approaches.Leading generation of synthetic and real-time accelerograms for dynamic analysis of major dams (e.g., Srisailam, Koyna, Tungabhadra, Teesta Stage-VI, Warna).Supervising the derivation of response spectra and input motion parameters for earthquake-resistant design of large hydraulic structures.Oversaw dynamic response studies and seismic safety evaluations for several major dam structures (e.g., Jhuj Dam, Srisailam Dam, Tungabhadra, Teesta-VI, Pancheshwar). |
| 8. | <p>Assignment Name:</p> <ul style="list-style-type: none">Evaluation of Earthquake Ground Motion for Dynamic Analysis of Thoubal Dam, Manipur, CWPRS Report No. 2856 of 05/1991Report on the Blast Studies Carried Out for the Assessment of Safe Charges During construction of Power House at Kadra and Kodasalli Dam sites, Karnataka, CWPRS Report No. 2852 of 1991The Evaluation of Safe Charges to Prevent Damage to Krishnaraja Sagar Dam During Construction of Approach Channel, Tunnel & Exit Channel, Karnataka, CWPRS Report No. 2783 of 1990An Estimate of the Seismic Forces for Earthquake Resistant Design of Maithon Thermal Power Project, Bihar, CWPRS Report No. 2710 of 03/1990An Estimate of Site-Specific Earthquake Design Forces for the Proposed Mangalore Super Thermal Power Project, Karnataka, CWPRS Report No. 2679 of 12/1989An Estimate of Design Earthquake Response Spectra and Accelerograms for the Proposed Kayamkulam Super Thermal Power Project, Kerala, CWPRS Report No. 2673 of 11/1989 |



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| <ul style="list-style-type: none">An Estimate of Design Seismic Risk for the Site of Vindhyaachal STPP – Stage II, M.P., CWPRS Report No. 2 636 of 06/1989Microearthquake Investigations for the Study of Induced Seismicity in Itezhi Tezhi Reservoir Area, Zambia (of March 1981 – April 1987), CWPRS Report, October of 10/1989 <p>Client – Various Departments Position held: Senior Research Officer Location: Various Location Duration: Jan 1985-Sept 1991 Responsibilities:<ul style="list-style-type: none">Conducted detailed evaluation of site-specific earthquake ground motions and their impact on dynamic analysis of hydraulic structures, such as the Thoubal Dam, Manipur.Performed generation and calibration of design accelerograms and response spectra for power projects, including Mangalore, Kayamkulam, Vindhyaachal, and Maithon thermal power plants, essential for earthquake-resistant design.Led microearthquake data analysis and interpretation for induced seismicity studies at Itezhi Tezhi reservoir, Zambia, providing insights into reservoir-triggered seismic behavior.Powerhouse construction at Kadra and Kodasalli dam sites.Approach channel, tunnel, and exit channel construction near Krishnaraja Sagar Dam.Developed blast vibration monitoring protocols and recommended safe blasting practices to mitigate risks during excavation and construction.</p> |
| <p>Assignment Name:</p> <ul style="list-style-type: none">Report on Seismicity Studies at Sawalkot Dam Site, J & K State for the Period Sept 1979 to Sept. 1983, C WPRS Report No. 2243 of 02/1985Report on Microearthquake Studies at Warna Project, Maharashtra, CWPRS Report No. 2139 of 08/1983171. Seismicity Studies at Tipaimukh Dam Site, Manipur, CWPRS Report No. 2065 of 08/1982Report on Seismicity Studies at Subansiri Dam Site, Assam, CWPRS Report No. 2053 of 07/1982 <p>Client – Various Departments Position held: Research Officer Location: Various Location Duration: Sept 1979-Sept 1984 Responsibilities:<ul style="list-style-type: none">Actively participated in the design, deployment, and maintenance of temporary microseismic monitoring networks at major dam project sites including:<ul style="list-style-type: none">Sawalkot Dam (Jammu & Kashmir)Warna Project (Maharashtra)Tipaimukh Dam (Manipur)Subansiri Dam (Assam)Conducted seismograph station calibration, sensor placement, and field data acquisition, often in remote and geologically complex terrain.Processed and interpreted microearthquake data using analog and early digital techniques to evaluate:<ul style="list-style-type: none">Local seismic activityFault orientations and depthsCorrelation with geological features and tectonic settingsContributed to identifying active fault zones and seismic trends relevant for long-term dam safety</p> |

Expert's contact information: Email id: idgrh4@gmail.com phone: +91-9423008130)



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**Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of a Contract award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification, dismissal by the Client, and/or sanctions by the Bank.

Dr. Ishwar Datt Gupta

24.06.2025

Name of Expert

Signature

Date



Arvind Kumar Dheer-AGM Tender

24.06.2025

Name of Authorized Representative of
the Consultant

Signature

Date



Regt. No. 70 MAY - 336

Roll No. 216401

Hanjra University

B.Sc. Examination (Three-Year Degree Course)

Certified that Sohner Datt, son/daughter
of Shri Naresh Kumar, and of
the Ahir College, Pureways,
obtained the degree of Bachelor of Science (Three-Year Degree Course)
in this University, having passed the examination for the said degree
held in April, 1974, in the First Division.

Passed also in the additional subject of General Education.

Jyoti Singh

Registrar

Chandigarh, June 18, 1974.

Mrs. Chaudhary

S. Parkash

Chancellor





विज्ञान-निषणात्, 1976.

मम अधिकृत किया जात्वा है कि सन् 1976 में, परीक्षा के उपरांत विज्ञान-निषणात्
की उपाधि के योग्य सिद्ध होने पर ईश्वर दत्त, सुभुन - जय नारायण
को 1977 के दोकांत-समारोह में उक्त उपाधि प्रदान की गई।

विषय मौतिकी

अर्थो ग्रथम

University of Delhi

MASTER OF SCIENCE, 1976.

This is to certify that Ishwer Datt & Jai Narain
having been examined in 1976, and found qualified for
the degree of Master of Science was admitted to the said
degree at the Convocation held in 1977.

Subject Physics

Division First



लोकमान
पूर्ण-परिषद्
विश्वी विश्वविद्यालय
Registrar,
University of Delhi.

दिल्ली, दिनांक 28 फरवरी, 1977.
Delhi, dated the 28th February, 1977.

मुख्यालय,
विश्वी विश्वविद्यालय
Vice-Chancellor,
University of Delhi.



University of Southern California

The Trustees of the University by virtue of the authority vested
in them and on the recommendation of the faculty of

The School of Engineering

have conferred the degree of

Master of Science in Civil Engineering

Earthquake Engineering

on

Jahner Datt Gupta

Given at Los Angeles, California, on the sixteenth day of August, in the year
of our Lord, one thousand nine hundred and eighty-five

George M. Zimbelman
President of the University

Cecil T. Shantz
Chairman of the Board of Trustees



Leland Stanford



We the CHANCELLOR,
the VICE-CHANCELLOR
and the MEMBERS

of the EXECUTIVE COUNCIL,
on the recommendation of the SENATE
of the UNIVERSITY of POONA certify
that the Degree of

Doctor of Philosophy
(*Physics*)

has been conferred at PUNE,
at the convocation ceremony
held on 25th October 1988.
on Sudarshan Tatt

Who has been found
duly qualified for the same

IN TESTIMONY

whereof are set the Seal of the
University and the Signature of the
Vice-Chancellor.



१९८८। नवं दिसंबर २५।
कुलगुडी

विश्वावाचारणाती
विश्वावाचारणाती

विश्वावाचारणाती
या पदवीस पाठ उत्तमामुखे
त्यांना पुणे विषयात्तिवेचे
कुलगुडी, कुलगुडी, फारकारिणीसे सदस्य,
जागी विषिसांचे सदस्य योज्या अनुमतीने

विश्वावाचारणाती

(पदवी विज्ञान —)

ही पदवी, पुणे येबे दि. २५ डिसंबर १९८८
या दिवरी शालेलया पदवीच्यातात्तारभास्त्रसंगी,
प्रदत्त करण्यात येव आहे.
याची साल मुष्यान
पुणे विष्याविभागाचा कुलगुडी स्वाक्षरी आणि
विष्याविभागी जागीकृत मुष्या
येव अकित करण्यात येत आहेत.



Date: 24th June, 2025

To,
M/s Pureways Infra Private Limited
FH-1, A Block, Vardhman Plaza,
Mangalam Place, Rohini Sector-3, New Delhi-110085

I, ID Gupta, the undersigned, confirm to provide my consent exclusive to M/s Pureways Infra Private Limited having its registered office at FH-1, A-Block, Vardhman Plaza, Mangalam Place, Rohini Sector-3, New Delhi-110018 for proposing my CV as Key expert for the proposed project "Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs and Operational Assistance In Uttarakhand State under U-PREPARE Project" I also declare that I have not given my consent for the above-mentioned project to any organization/Firm.

I also confirm that my attached CV is true to the best of my knowledge and experience, and can be utilized for furnishing the proposal for the aforementioned project.

Signature (Full): Dr. Ishwar Dutt Gupta.

Name: ID Gupta
Contact Number: 9423008130



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FORM TECH-6: CURRICULUM VITAE (CV)

| | | |
|---|---|--|
| Position Title and No. | K-2 Disaster Risk Management/Shelter Specialist | |
| Name of Expert: | Naresh Kumar Mathur | |
| Date of Birth: | 30 th June 1959 | |
| Country of Citizenship/Residence | Indian | |

EDUCATION :

| Qualification | Institution | Duration |
|-----------------------|-----------------------|----------|
| B.E. in Civil | University of Jodhpur | 1980 |
| M.E in WRD | University of Roorkee | 1992 |
| Diploma in Management | IGNOU | 1995 |

Employment record relevant to the assignment :

| Period | Employing organization and your title/position. Contact information for references | Country | Summary of activities performed relevant to the Assignment |
|------------------|---|---------|---|
| 2022 – Till Date | Organization: Pureways Infra Private Limited Position: Team Leader Reference: 011-47512342 | India | <ul style="list-style-type: none"> • Review and use hydrological models to simulate water flow and predict potential flood areas. • Lead and manage the project team, ensuring efficient and effective execution of tasks. • Conduct detailed hydrological surveys to collect data on water flow, precipitation patterns, groundwater levels, and other relevant parameters. • Review a comprehensive drainage plan based on hydrological data and analysis. • Ensure the drainage system is designed to manage surface and subsurface water effectively, preventing flooding and erosion. • Coordinate with engineers and planners to integrate the drainage system with existing and planned infrastructure. • Integrate hydrological data with survey data to create a complete picture of the area's water dynamics and topography. • Act as the primary point of contact between the project team, government agencies, local communities, and other stakeholders. • Oversee detailed topographic and geospatial surveys to gather comprehensive data on the area's physical characteristics. • Develop a detailed plan for carrying out surveys and investigations across the Manipur Basin. • Facilitate regular meetings and communications to keep stakeholders informed and engaged. |
| 2017-2021 | Central Water Commission Member Position: Team Leader | India | <ul style="list-style-type: none"> • Supervision of Dam Safety assurance in the country, implementation of Dam Rehabilitation and Improvement Program (DRIP) (funded by |

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| Period | Employing organization and your title/position. Contact information for references | Country | Summary of activities performed relevant to the Assignment |
|-----------|--|---------|--|
| | Reference: 011- 26187232 | | <p>World Bank) for this purpose operated in 7 states o country with world bank Aid.. Supervision of all dam safety related aspects including Hydrology, Designs, Instrumentations, Dam Break Analysis, EAP/DMP etc.</p> <ul style="list-style-type: none"> Supervision of vetting of drawings for Polavaram Project mandated by Godavari Tribuna for its Hydrology, Planning Designing, Hydro-mechanical equipments, Instrumentations etc. Supervision of Hydrological Analysis of Water Resources Projects in the country Typically Kaleswaram Project Telangana, Design Flood Review of projects under Dam Rehabilitation and Improvement Programme. Finalisation of seismic design parameters for dams. |
| 2015-2017 | Organization: Central Water Commission Dam Safety Organization Position: Chief Enigneer/Team Leader Reference: 011- 26187232 | India | <ul style="list-style-type: none"> Formulation and updation of standards and Guidelines, Updation and Improvement of State of Art, BIS activities, R&D activities and Trainings etc., particularly in newer areas of seismic proofing of designs, dam break analysis, instrumentation, back water studies, foundations etc. Arun-3 in Nepal, Puntsangchu 1 & 2 Projects In Bhutan. In nescent stage of the board, preparation of data base of all projects and addressing interstate and technical aspects of the various projects ongoing and under construction. Supervision of Hydrological Analysis of Water Resources Projects. Develop team schedules and assist in the successful onboarding and training of team members. Create and communicate a clear list of expectations and goals for team members to follow. Offer emotional support to project team members and make people feel valued Maintain frequent communication to offer encouragement, amend tasks, and provide updates on goal progress. Implement incentives to keep the team motivated and focused on their daily tasks project goals. Provide frequent feedback on employee performance, address weaknesses or inefficiencies, and offer support to improve skill gaps. |
| 2012- | Organization:  | India | <ul style="list-style-type: none"> Conducted all activites related to bilateral joint |





| Period | Employing organization and your title/position. Contact information for references | Country | Summary of activities performed relevant to the Assignment |
|-----------|---|---------|--|
| 2015 | Ministry of WR, RD&GR, FM Wing Position: Commissioner/Team Leader Reference: 11-24362780 | | mechanisms on water between India and Bangladesh/ India and Nepal. Monitored implementation of Indo-Bangladesh Treaty on distribution of Ganga Water at Farakka during lean season, Implementation of central scheme of Flood Forecasting, Processing for central finance component of Flood Management Programme implemented by state governments |
| 2006-2012 | Organization: CWC, Hydrological Study Position: Chief Engineer/Team Leader Reference: 011-26106369 | India | <ul style="list-style-type: none"> • Hydrological Analysis of Water Resources Projects in the country including Hydropower projects to be considered by Central Electricity Authority for technical concurrence, providing Hydrological inputs to Environmental Advisory Committee as its member for considering Environmental clearance of River Valley Development Projects, Design Flood Review of projects under Dam Rehabilitation and Improvement Programme. • Held additional charge of Charge of CE, Dam safety Organisation for about a year with duties of Formulation and updation of standards and Guidelines, Updation and Improvement of State of Art, BIS activities, R&D activities and Trainings etc., particularly in newer areas of seismic proofing of designs, dam break analysis, instrumentation, back water studies, foundations etc., |
| 2003-2006 | Organization: CWC SM Ote. Position: Director Reference: 011 2618 7232 | India | <ul style="list-style-type: none"> • Upgradation of Hardware, softwares, networking facilities in Central Water Commission HQ with special emphasis on digitization of old records of CWC, uploading of Guidelines, Manuals and other publications in public domain. Held additional Charge of Instrumentation Directorate for about six months. |
| 1997-2003 | Organization: CWC Narmada & Tapi Basin Organization Vadodara Position: Team Leader/ Superintending Engineer Reference: 011-26106369 | India | <ul style="list-style-type: none"> • Hydrological observations, Flood Forecasting, Monitoring of WR Dev projects particularly under Federal Assistance, Coordination between regional office with CWC HQ, Regional office with State Govts and Regional office with its sub offices, Implementation of World bank assisted Hydrology Project. • Hydrological Analysis of Water Resources Projects in the country Design Flood Review of projects under Dam Safety assurance and rehabilitation Programme with World Bank Assistance. Typically, the design Flood Review of Hirakud Darn. |
| 1988- | Organization: | India | <ul style="list-style-type: none"> • Hydrological Analysis of Water Resources |





| Period | Employing organization and your title/position. Contact information for references | Country | Summary of activities performed relevant to the Assignment |
|---------------------|--|---------|---|
| 1997 | CWC, Gates Des. (E&NE) Dte Position: Dy. Director/ Team Leader Reference: 011 2618 7232 | | Projects in the Country Design Flood Review of projects under Dam Safety assurance and Rehabilitation Programme with World Bank Assistance. Typically, the design Flood Review of Hirakud Dam. |
| 1984-1988 | Organization: Water Resource Department, Sub Div. Ajmer Position: Team Leader/ Assistant Director Reference: 011- 26187232 | India | <ul style="list-style-type: none"> Contributed to Guidelines for Preparation of Minor Schemes related to Water Resources Projects. Gauge, discharge and other related data with primary and secondary validation with ultimate goal of preparation of region flood study report for small catchments. Collection of Data using various scientific methodology and carrying out primary and secondary validation. |
| Apr. 1982-Apr. 1984 | Organization: Public Health Engineering Department, Rajasthan Position: Assistant Engineer/Team Leader Reference: 0141-2222337 | India | <ul style="list-style-type: none"> Physical and financial progress of Commissioning of villages for drinking under various schemes of government such as Minimum Need Programme, Accelerated Rural Programme etc. |
| Mar. 1981-Apr. 1982 | Organization: Irrigation Department Rajasthan Position: Junior Engineer Reference: 0141-2700452 | India | <ul style="list-style-type: none"> Design of Minor Irrigations Project, Construction of Flood Restoration Structure after devastating floods in Jaipur during July 1981. |

Membership in Professional Associations and Publication : Fellow of Institution of Engineers India.

Language Skills (indicate only languages in which you can work):

| Languages | Speaking | Reading | Writing |
|-----------|----------|---------|---------|
| English | Good | Good | Good |
| Hindi | Good | Good | Good |





Adequacy for the Assignment:

| S.No | Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks |
|------|---|
| 1. | <p>Assignment Name: Engaging Consulting Services for Preparation of Detailed Project Report for Preparation of Drainage Plan for Joshimath Town, Chamoli, Uttarakhand Client – Uttarakhand Piyal Sanshan Vikas Evam Nirman Nigam Position held: Team Leader Location: Uttarakhand</p> <p>Duration: Jan 2024 –May 2025</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> • Lead and manage the project team, ensuring efficient and effective execution of tasks. • Allocate tasks and responsibilities to team members based on their expertise. • Act as the primary point of contact between the project team, local authorities, and other stakeholders. • Coordinate with government agencies, community leaders, and other stakeholders to align project activities with community needs and regulatory requirements. • Conduct detailed hydrological surveys to collect data on water flow, precipitation patterns, groundwater levels, and other relevant parameters. • Develop and use hydrological models to simulate water flow and predict potential flood areas. • Analyze data to understand the impact of various factors on water dynamics in the area. • Perform risk assessments to identify areas susceptible to flooding, erosion, and other water-related hazards. • Develop strategies to mitigate identified risks and enhance the safety of the Joshimath Nagar area. • Develop a comprehensive drainage plan based on hydrological data and analysis. • Ensure the drainage system is designed to manage surface and subsurface water effectively, preventing flooding and erosion. • Coordinate with engineers and planners to integrate the drainage system with existing and planned infrastructure. • Oversee detailed topographic and geospatial surveys to gather comprehensive data on the area's physical characteristics. • Use advanced surveying instruments such as DGPS, total stations, and GIS technology to ensure accuracy. • Integrate hydrological data with survey data to create a complete picture of the area's water dynamics and topography. |
| 2. | <p>Assignment Name: Preparation of Master Plan of Manipur River Basin after conducting field Survey & Study. Client – Department of Water Resources, R.D and G.R, Imphal Division, Brahmaputra Board Position held: Team Leader Location: Manipur</p> <p>Duration: Mar 2022 –May 2025</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> • Act as the primary point of contact between the project team, government agencies, local communities, and other stakeholders. • Facilitate regular meetings and communications to keep stakeholders informed and engaged. • Develop a detailed plan for carrying out surveys and investigations across the Manipur Basin. • Utilize advanced surveying technologies such as DGPS, total stations, and GIS to ensure accurate data collection. • Conduct comprehensive surveys to gather data on topography, land use, soil types, water bodies, and existing infrastructure. • Perform detailed hydrological studies to understand the water dynamics, including surface |





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| | <ul style="list-style-type: none">water, groundwater, rainfall patterns, and river flow characteristics.Analyze preliminary data to identify key areas of focus and potential challenges.Data Integration:Integrate survey data with hydrological information to create a comprehensive database for the Manipur Basin. |
| 3. | <p>Assignment Name: Cauvery Basin Kabani Sub Basin Kadamanthode Medium Irrigation Project-Preliminary Topographic Survey in Pulpally Grama Panchaya ,Wayand District-Investigation Work.</p> <p>Client – Cauvery Division , Sultan Bathery, Irrigation Department Wayanad.</p> <p>Position held: Team Leader</p> <p>Location: Kerala</p> <p>Duration: 2023-2024</p> <p>Responsibilities:</p> <ul style="list-style-type: none">Overseeing a multidisciplinary team of surveyors, GIS experts, environmental scientists, and engineers. Ensuring all team members are aligned with project goals and timelines.Developing detailed project plans, including timelines, resource allocation, and task assignments.Liaising with government agencies, local authorities, and community leaders to ensure smooth project execution and address any concerns.Overseeing the collection of hydrological data, including rainfall, river flow, groundwater levels, and soil moisture content.Conducting water balance studies to understand the availability and distribution of water resources within the project area.Analyzing runoff patterns and flood risks to identify suitable locations for irrigation infrastructure and to design appropriate flood mitigation measures.Planning and overseeing the preliminary topographic survey, ensuring that data collection methods are appropriate and cover all necessary areas.Ensuring the accuracy and reliability of topographic data collected by field teams. This includes checking data consistency and resolving any discrepancies.Integrating topographic data with hydrological models to create a comprehensive understanding of the terrain and water flow dynamics. |
| 4. | <p>Assignment Name:</p> <ol style="list-style-type: none">Implementation of Dam Rehabilitation and Improvement Program (DRIP) (funded by World Bank) for Polavaram ProjectImplementation of Dam Rehabilitation and Improvement Program (DRIP) (funded by World Bank) for Kaleswaram Project <p>Client – Central Govt. of India</p> <p>Position held: Team Leader</p> <p>Location: Andhra Pradesh</p> <p>Duration: 2017-2021</p> <p>Responsibilities:</p> <ul style="list-style-type: none">Organizing work.Communicating goals.Connecting work to context.Delegating tasks.Supervision of vetting of drawings for Polavaram Project mandated by Godavari Tribuna for its Hydrology.Planning Designing, Hydro-mechanical equipments, Instrumentations etc.Leading by example.Allocating and managing resources.Design Flood Review of projects under Dam Rehabilitation and Improvement Programme,Finalisation of seismic design parameters for dams.Problem solving.Managing project progress. |





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| | <ul style="list-style-type: none">• Managing the day-to-day activities of the team.• Motivating the team to achieve organizational goals.• Developing and implementing a timeline to achieve targets.• Delegating tasks to team members.• Conducting training of team members to maximize their potential.• Empowering team members with skills to improve their confidence, product knowledge, and communication skills.• Conducting quarterly performance reviews. |
| 5. | <p>Assignment Name:</p> <p>1. Arun-3 in Nepal, 2. Punatsangchhu-I (1,200 MW) & Punatsangchhu-II (1,020 MW)</p> <p>Client – Sapdc (Sjw) / Patel Engineering Limited</p> <p>Position held: Chief Enigneer/Team Leader</p> <p>Location: Nepal, Bhutan</p> <p>Duration: 2015-2017</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Supervision of Hydrological Analysis of Water Resources Projects.• Develop team schedules and assist in the successful onboarding and training of team members• Create and communicate a clear list of expectations and goals for team members to follow• Offer emotional support to project team members and make people feel valued• Maintain frequent communication to offer encouragement, amend tasks, and provide updates on goal progress• Implement incentives to keep the team motivated and focused on their daily tasks project goals• Provide frequent feedback on employee performance, address weaknesses or inefficiencies, and offer support to improve skill gaps• Create a workspace that encourages creativity and innovation to get the most out of the team. |
| 6. | <p>Assignment Name: Monitored implementation of Indo-Bangladesh Treaty on distribution of Ganga Water at Farakka</p> <p>Client – Govt. of India</p> <p>Position held: Commissioner/Team Leader</p> <p>Location: India</p> <p>Duration: 2012-2015</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Implementation of central scheme of Flood Forecasting, Processing for central finance component of Flood Management Programme implemented by state governments• Conducted all activites related to bilateral joint mechanisms on water between India and Bangladesh/ India and Nepal.• Implement incentives to keep the team motivated and focused on their daily tasks project goals• Provide frequent feedback on employee performance, address weaknesses or inefficiencies, and offer support to improve skill gaps• Nurture collaboration amongst team members• Create a workspace that encourages creativity and innovation to get the most out of the team• Quickly and effectively resolve team conflicts• Write project reports as necessary. |
| 7. | <p>Assignment Name: Environmental clearance of River Valley Development & Design Flood Review under Dam Rehabilitation and Improvement Programme.</p> <p>Client – Central Electricity Authority</p> <p>Position held: Chief Engineer/Team Leader</p> |



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| | <p>Duration: 2006-2012</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Providing Hydrological inputs to Environmental Advisory• Design Flood Review of projects under Dam Rehabilitation and Improvement Programme.• Work with departmental heads, managers, and other stakeholders to develop team goals and delegate tasks to the appropriate team member• Develop team schedules and assist in the successful onboarding and training of team members• Create and communicate a clear list of expectations and goals for team members to follow• Offer emotional support to project team members and make people feel valued• Maintain frequent communication to offer encouragement, amend tasks, and provide updates on goal progress. |
| 8. | <p>Assignment Name: Upgradation of Hardware, softwares, networking facilities in Central Water Commission HQ.</p> <p>Client – CWC</p> <p>Position held: Director</p> <p>Location: Delhi</p> <p>Duration: 2003-2006</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Upgradation of Hardware, softwares, networking facilities in Central Water Commission HQ with special emphasis on digitization of old records of CWC, uploading of Guidelines, Manuals and other publications in public domain. Held additional Charge of Instrumentation Directorate for about six months.• Promote the success of CWC• Not accept benefits from third parties• Maintain filing and reporting obligations• Comply with additional legislation and regulations |
| 9. | <p>Assignment Name: Hydrological observations, Flood Forecasting, Monitoring of WR Dev projects</p> <p>Position held: Team Leader/ Superintendent Engineer</p> <p>Duration: 1997-2003</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Coordination between regional office with CWC HQ, Regional office with State Govts and Regional office with its sub offices,• Implementation of World bank assisted Hydrology Project.• Define the project management process to be applied to the project.• Select team members and, If cross-functional as the Core Team Leader, select Core Team Members.• Prepare project plan and obtain management approval of the project plan.• Assure that all team members understand their roles and accept their responsibilities• Apply project resources according to the approved project plan.• Analyze risk and instigate avoidance activities. Establish contingency plans and identify trigger events and responsibility for initiating corrective action.• Track and report on progress to plan.• Analyze the actual performance against the plan and make adjustments consistent with plan objectives.• Negotiate the performance of activities with team members and their managers.• Establish and publish clear priorities among project activities. |
| 10. | <p>Assignment Name: Hydrological analysis and Design Flood review of Hirakud Dam Project</p> <p>Position held: Dy. Director/ Team Leader</p> <p>Location: Punjab</p> <p>Duration: 1988-1997</p> <p>Responsibilities:</p> |



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| | <ul style="list-style-type: none">• Hydrological Analysis of Water Resources Projects in the Country Design Flood Review of projects under Dam Safety assurance and Rehabilitation Programme with World Bank Assistance. Typically, the design Flood Review of Hirakud Dam.• Keep all stakeholders informed of progress and issues.• Involve functional expertise in design reviews and key decisions as well as risk strategies.• Assure timely adaptive action is taken.• Manage change to preserve business plan commitments. Initiate Phase Review if objectives must change.• Negotiate the performance of activities with team members and their managers.• Establish and publish clear priorities among project activities.• Arbitrate and resolve conflict and interface problems within the project.• Provide input on the performance of project team members to their supervisors. |
| 11. | <p>Assignment Name: Preparation of Minor Schemes related to Water Resources Projects. Client – Govt. of India Position held: Team Leader/ Assistant Director</p> <p>Duration: 1984-1988 Responsibilities:</p> <ul style="list-style-type: none">• Contributed to Guidelines for Preparation of Minor Schemes related to Water Resources Projects.• Gauge, discharge and other related data with primary and secondary validation with ultimate goal of preparation of region flood study report for small catchments.• Collection of Data using various scientific methodology and carrying out primary and secondary validation.• Prepare project plan and obtain management approval of the project plan.• Assure that all team members understand their roles and accept their responsibilities• Apply project resources according to the approved project plan.• Analyze risk and instigate avoidance activities. Establish contingency plans and identify trigger events and responsibility for initiating corrective action.• Track and report on progress to plan.• Analyze the actual performance against the plan and make adjustments consistent with plan objectives.• Involve functional expertise in design reviews and key decisions as well as risk strategies. |
| 12. | <p>Assignment Name: Various schemes of government such as Minimum Need Programme, Accelerated Rural Programme etc. Client – Govt. of India Position held: Assistant Engineer/Team Leader Location: Rajasthan Duration: 1982-1984 Responsibilities:</p> <ul style="list-style-type: none">• Physical and financial progress of Commissioning of villages• Keep all stakeholders informed of progress and issues.• Involve functional expertise in design reviews and key decisions as well as risk strategies.• Assure timely adaptive action is taken.• Manage change to preserve business plan commitments. Initiate Phase Review if objectives must change.• Negotiate the performance of activities with team members and their managers. |
| 13. | <p>Assignment Name: Design Minor Irrigations and Construction of Flood Restoration Structure Project Client – Govt. of India Position held: Junior Engineer Location: Jaipur Duration: 1981-1982 Responsibilities:</p> |



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| | <ul style="list-style-type: none">• Design of Minor Irrigations Project, Construction of Flood Restoration Structure after devastating floods.• Coordinate management and technical decisions.• Arbitrate and resolve conflict and interface problems within the project.• Define the project management process to be applied to the project.• Select team members and, if cross-functional as the Core Team Leader, select Core Team Members.• Prepare project plan and obtain management approval of the project plan.• Assure that all team members understand their roles and accept their responsibilities• Apply project resources according to the approved project plan. |
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Expert's contact information: (e-mail: Mathur_nk@yahoo.com phone: +91-9818472745)

Certification:

I, , the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of a Contract award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification, dismissal by the Client, and/or sanctions by the Bank.

Naresh Kumar Mathur

N. K. Mathur

24.06.2025

Name of Expert

Signature

Date



Arvind Kumar Dheer-AGM Tender

Name of authorized
Representative of the Consultant

Signature

24.06.2025

Date



Serial No. 8803

Enrolment No. 881828

UNIVERSITY OF ROORKEE



Having completed the course of study approved by the
University and having passed the prescribed examinations

NARESH KUMAR MATHUR
has been admitted to the degree of
Master of Engineering
of this University in the field of
Water Resources Development
and has been placed in the
First Division with Honours

I place my hand this Nineteenth day of February
One Thousand Nine Hundred and Ninety Four

A handwritten signature of P.C. Mohan.

P. C. Mohan
Registrar

A handwritten signature of H.C. Venkateswaran.

H. C. Venkateswaran
Vice Chancellor



A handwritten signature of T.G.

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प्रमाणित नं. 45
कॉड नं.

जोधपुर विश्वविद्यालय

प्रमाणित किया जाता है कि

नेपेश कुमार माथुर

ने इस विश्वविद्यालय से 1980 की परीक्षा में

बैचलर ऑफ इंजीनियरिंग

(सिविल इंजीनियरिंग शास्त्र)

की उपाधि प्राप्ति श्रेणी में प्राप्त की

THE UNIVERSITY OF JODHPUR

This is to certify that

NAPESH KUMAR MATHUR

obtained the degree of

BACHELOR OF ENGINEERING

(CIVIL ENGINEERING BRANCH)

of this University in the

Examination of 1980 and that

he/she was placed in the First Division

S. S. Chaturvedi
Vice-Chancellor
माध्यम-विद्यालय
दिनांक (D. D.) 1981



The Institution of Engineers (India)

This Diploma of Membership



is granted to RAJENDRA KUMAR

who was elected to



on the ELEVENTH day of NOVEMBER 1975

In witness whereof the said Institution has caused its Common Seal to be affixed this EIGHTEENTH day of SEPTEMBER 1975

Satish Chandra Bhattacharya

B.Tech.

Member A.I.C.E. & G.I.C.E.



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Date: 24th June, 2025

To,
M/s Pureways Infra Private Limited
FH-1, A Block, Vardhman Plaza,
Mangalam Place, Rohini Sector-3, New Delhi-110085

I, NK Mathur, the undersigned, confirm to provide my consent exclusive to M/s Pureways Infra Private Limited having its registered office at FH-1, A-Block, Vardhman Plaza, Mangalam Place, Rohini Sector-3, New Delhi-110018 for proposing my CV as Key expert for the proposed project "Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs and Operational Assistance in Uttarakhand State under U-PREPARE Project" I also declare that I have not given my consent for the above-mentioned project to any organization/Firm.

I also confirm that my attached CV is true to the best of my knowledge and experience, and can be utilized for furnishing the proposal for the aforementioned project.

Signature (Full): N.K. Mathur

Name: NK Mathur
Contact Number: 9818472745





FORM TECH-6: CURRICULUM VITAE (CV)

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|---|---------------------------------|
| Position Title and No. | K-3 Geo Spatial Analysis Expert |
| Name of Expert: | Dr. Santosh Kumar Singh |
| Date of Birth: | 12 th February 1977 |
| Country of Citizenship/Residence | Indian |

EDUCATION :

| Qualification | Institution | Duration |
|----------------------------|---|----------|
| Ph.D, Remote Sensing & GIS | Mahatma Gandhi Chitrakoot Gramodaya University, Chitrakoot, Satna. (M.P.) | 2018 |
| M.Sc, Remote Sensing & GIS | Mahatma Gandhi Chitrakoot Gramodaya University, Chitrakoot, Satna. (M.P.) | 2005 |

Employment record relevant to the assignment :

| Period | Employing organization and your title/position. Contact information for references | Country | Summary of activities performed relevant to the Assignment |
|----------------------|--|---------|---|
| Feb 2020 – Till Date | Organization: Pureways Infra Private Limited Position: GIS Expert Reference: 011-47512342 | India | <ul style="list-style-type: none"> • Collect and manage geospatial data from various sources, including satellite imagery, aerial surveys, and ground-based measurements. • Create detailed topographic maps of the Janpath Chamoli area using GIS tools, showcasing elevations, slopes, and other relevant terrain features. • Integrate geospatial data with other survey data to create a comprehensive and accurate database for analysis. • Perform spatial analysis to identify vulnerable areas, potential hazards, and factors affecting the safety of Joshimath Nagar. • Utilizing LiDAR (Light Detection and Ranging) data to create highly accurate 3D models of the terrain. This involves integrating LiDAR point clouds with GIS software to generate detailed topographic and elevation maps. • Collecting and processing high-resolution satellite and aerial imagery to supplement LiDAR data, offering additional context and visual information for the project. • Analyzing topographic data to determine terrain characteristics, such as elevation, slope, and landforms, which are crucial for designing the corridor's alignment. • Using GIS tools to evaluate multiple alignment options and optimize the route based on factors such as topography, land use, and environmental constraints. |

*[Signature]*



| Period | Employing organization and your title/position. Contact information for references | Country | Summary of activities performed relevant to the Assignment |
|--------------------|--|---------|---|
| | | | <ul style="list-style-type: none"> Performing geospatial analyses to assess the impact of the proposed alignment on existing infrastructure, natural features, and land use patterns. |
| Jan 2016-Jan 2020 | Organization: TAHAL Consulting Engineers Ltd. Position: Assistant General Manager Reference: 0124 488 9000 | India | <ul style="list-style-type: none"> Develop the knowledge base for each sub-basin and administrative units (Districts and Blocks) in the 8 major basins in Uttar Pradesh (Yamuna, Ganga, Ramganga, Gomti, Ghaghara, Rapti, Gandak and Sone) Develop GIS-based spatial data compatible with existing commonly-used GIS systems (exportable to other systems). Delimitate all the Administrative layers including assembly constituency, all the drainage pattern, land-use/land-cover, basin boundary & sub-basin boundary & other hydrological spatial data (stream gauges, lake and reservoir gauges, ground water observation wells, environmental and ecological stations, etc.). Develop Detail Maps depicting Hydrological features of the basin, sub-basin and administrative units (Districts and Blocks) Develop Social assessment, Environment and Ecological maps for basin, sub-basin and administrative units (Districts and Blocks). For Phase-II area map should be 1:5000 scale and rest is 1:50000 |
| July 2013-Dec 2015 | Organization: PKS Infra Engineering Pvt. Ltd Position: Remote Sensing & GIS Expert Reference: 0120 435 4111 | India | <ul style="list-style-type: none"> Collection of data of the Study area, hydrological Mapping Topographical Survey Satellite based DEM model for mapping analysis for Terrene Analysis Ground survey Land Use Land Cover Mapping for Cropping pattern. |
| Nov 2007-Feb 2013 | Organization: SMEC India Pvt. Ltd. Position: GIS Expert Reference: 0124 450 1100 | India | <ul style="list-style-type: none"> Preparation of inventory of all existing sources (operational and defunct) Including the traditional sources and marking their respective locations in GIS map using user friendly software. Preparation of zone-wise maps of distribution system of the town on 1cm=120m scale and digitization. The entire work will be extended to GIS platform with spatial and non-spatial data wherein the assets shall be geo referenced using GPS enabled devices, developing maps and atlas as well as Remote Sensing data analysis. Marking of all assets, service lines and property connections on GIS maps and assigning |





| Period | Employing organization and your title/position. Contact information for references | Country | Summary of activities performed relevant to the Assignment |
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| | | | <ul style="list-style-type: none"> attributes (to be decided in consultation with PHED) to each unit. Customization of map viewing software which are usages by Govt dept. of Rajasthan. |

Membership in Professional Associations and Publication :

- Overview of Degrading Agriculture in Jaunpur branch Canal Command: A GIS/Remote Sensing Based Approach" Published International Journal of Scientific and Research Publications, Volume 7, Issue 5, May 2017 74 ISSN 2250-3153. –
- "GIS Automation in Ground Water Analysis" published in International Journal of Research in Engineering and Science (IRES)

Language Skills (Indicate only languages in which you can work):

| Languages | Speaking | Reading | Writing |
|-----------|----------|---------|---------|
| English | Good | Good | Good |
| Hindi | Good | Good | Good |

Adequacy for the Assignment:

| S.No | Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks |
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| 1. | <p>Assignment Name: Engaging Consulting Services for Preparation of Detailed Project Report for Preparation of Drainage Plan for Joshimath Town, Chamoli, Uttarakhand Client – Uttarakhand Paryajal Sansadhan Vikas Evam Nirman Nigam Position held: GIS Expert Location: Uttarakhand Duration: Jan 2024 – May 2025 Responsibilities:</p> <ul style="list-style-type: none"> • Collect and manage geospatial data from various sources, including satellite imagery, aerial surveys, and ground-based measurements. • Topographic Mapping and Create detailed topographic maps of the Janpath Chamoli area using GIS tools, showcasing elevations, slopes, and other relevant terrain features. • Data Integration & Integrate geospatial data with other survey data to create a comprehensive and accurate database for analysis. • Perform spatial analysis to identify vulnerable areas, potential hazards, and factors affecting the safety of Joshimath Nagar. |
| 2. | <p>Assignment Name: Preparation of Master Plan of Manipur River Basin after conducting field Survey & Study. Client – Department of Water Resources, R.D and G.R, Imphal Division, Brahmaputra Board Position held: GIS Expert Location: Manipur Duration: 2022 – May 2025 Responsibilities:</p> <ul style="list-style-type: none"> • Acquire, process, and manage spatial datasets from satellite imagery, drones, GPS, and secondary sources. |





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| | <ul style="list-style-type: none"> • Develop, maintain, and update geospatial databases using GIS software (e.g., ArcGIS, QGIS). • Prepare high-quality thematic maps, 3D visualizations, and cartographic outputs for reports and presentations. • Perform spatial analysis including overlays, buffering, proximity, network, and raster analysis. • Analyze satellite/aerial imagery for land use/land cover classification, change detection, topographic analysis, and hazard mapping. • Process data from various sensors (e.g., optical, LiDAR, SAR) for specific project applications. • Design GIS-enabled mobile data collection tools. • Coordinate with field teams for accurate spatial data collection and geotagging of assets or features. • Integrate GIS tools with hydrological, environmental, or socio-economic models for scenario planning. • Provide spatial inputs for impact assessments, risk analysis, and site suitability studies. • Collaborate with government departments, planners, and engineers to understand project requirements and deliver geospatial inputs. • Conduct training sessions and build GIS capacity within the client or partner institutions. • Prepare technical documentation, spatial analysis reports, metadata, and map atlases. • Ensure adherence to data standards, quality control, and project timelines. • Integrate data from multiple sources, including satellite imagery, aerial photos, existing maps, reports, and real-time field-collected GPS data. • Ensure spatial data accuracy, consistency, and compatibility with relevant coordinate systems. • Create and manage a geodatabase for the river basin. • Digitize and geo-reference paper maps and survey sketches. • Organize thematic layers (e.g., drainage, watershed boundaries, land use/land cover, settlements, flood zones, etc.) |
| 3. | <p>Assignment Name: Final Alignment design including Aerial LiDAR survey and Other related works for Varanasi-Howrah High Speed Corridor (about 760 Kms.long)</p> <p>Client – National High-Speed Rail Corporation Limited</p> <p>Position held: GIS Expert</p> <p>Location: Varanasi-Howrah</p> <p>Duration: 2021 – Till date</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> • Utilizing LiDAR (Light Detection and Ranging) data to create highly accurate 3D models of the terrain. This involves integrating LiDAR point clouds with GIS software to generate detailed topographic and elevation maps. • Collecting and processing high-resolution satellite and aerial imagery to supplement LiDAR data, offering additional context and visual information for the project. • Topographic and Terrain Analysis: Analyzing topographic data to determine terrain characteristics, such as elevation, slope, and landforms, which are crucial for designing the corridor's alignment. • Using GIS tools to evaluate multiple alignment options and optimize the route based on factors such as topography, land use, and environmental constraints. • Performing geospatial analyses to assess the impact of the proposed alignment on existing infrastructure, natural features, and land use patterns. • Creating 3D models of the proposed corridor alignment to visualize the project in the context of the existing landscape and urban areas. • Assisting in the final alignment design by analyzing and integrating various factors like terrain, environmental impact, and logistical considerations into the GIS platform. |
| 4. | <p>Assignment Name: Cauvery Basin Kabani Sub Basin Kadamanthode Medium Irrigation Project-Preliminary Topographic Survey in Pulpally Grama Panchaya ,Wayand District-Investigation Work.</p> <p>Client – Cauvery Division , Sultan Bathery, Irrigation Department Wayanad.</p> <p>Position held: GIS Expert</p> |





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| | <p>Location: Kerala Duration: 2023-2024 Responsibilities:</p> <ul style="list-style-type: none"> Collecting and analyzing high-resolution satellite images and aerial photos to understand the terrain and existing land use patterns. Coordinating with survey teams to gather ground-truth data using GPS and other surveying instruments. Creating detailed topographic maps that show elevation, slope, and other critical landscape features. These maps help in understanding the terrain and planning the irrigation infrastructure. Analyzing the drainage patterns, watershed boundaries, and flow accumulation areas to understand the water movement and identify suitable locations for irrigation structures. Land Use and Land Cover Analysis: Identifying different land use types (agriculture, forest, urban areas) and their extent to assess the impact of the irrigation project on the local environment and communities. |
| | <ul style="list-style-type: none"> Developing 3D models of the terrain to visualize the landscape and simulate various project scenarios. Simulating flood scenarios to identify flood-prone areas and design appropriate mitigation measures. Integrating data from various sources (e.g., satellite imagery, survey data, hydrological models) into a cohesive GIS database. Creating maps, charts, and other visual tools to help project stakeholders understand the data and make informed decisions. |
| 5. | <p>Assignment Name: PREPARATION OF DPR FOR SUGGESTING THE ALTERNATIVE MEASURES TO OVERCOME THE PROBLEM OF BANK EROSION IN AFFECTED REACHES OF RIVER KHOWAI IN TRIPURA ALONG WITH PREPARATION OF WORKING ESTIMATE INCLUDING CARRYING OUT FIELD SURVEY, DATA COLLECTION, SOIL SURVEY & INVESTIGATION COMPLETE.</p> <p>Client – Department of Water Resources, RD & GR, Agartala Division, Brahmaputra Board.</p> <p>Position held: GIS Expert</p> <p>Location: TRIPURA</p> <p>Duration: 2023-2024</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> Collaborate with project stakeholders to define the scope and objectives of the DPR. Develop a project timeline and ensure adherence to deadlines. Survey Planning: Plan and design field surveys to collect comprehensive data on riverbank conditions, including erosion-prone areas. Utilize DGPS, total stations, and other surveying instruments to collect accurate geospatial data. Gather data on river flow, sediment load, and historical erosion patterns. Conduct soil sampling and analysis to determine soil composition, strength, and erosion susceptibility. Investigate sub-surface conditions and groundwater levels impacting bank stability. Integrate field data, satellite imagery, and historical records into GIS for comprehensive analysis. |
| 6. | <p>Assignment Name: Project Management Consultant (PMC) for Assisting the Udaipur Smart City Ltd. to Design, Develop, Manage and Implementation of Smart City Project Under the Smart City Mission (SCM)</p> <p>Client – Udaipur Smart City Limited</p> <p>Position held: GIS Expert</p> <p>Location: Udaipur</p> <p>Duration: 2022-2024</p> <p>Responsibilities:</p> |



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| | <ul style="list-style-type: none">• Design and establish the GIS framework for the Smart City.• Create a centralized geodatabase integrating multiple urban datasets (transport, utilities, land records, public assets, etc.).• Ensure data is standardized, interoperable, and aligned with national geospatial standards (e.g., NSDI, OGC standards).• Develop or update high-resolution base maps using satellite imagery, drone data, or city survey maps.• Prepare thematic layers:• Land use & land cover• Transportation networks• Utilities (water, sewerage, power, telecom)• Property boundaries and ownership• Environmental and heritage zones |
| 7. | <p>Assignment Name: Carrying out Balance Survey and Investigation Works including Engineering Services for Simsang Dam Project in Meghalaya</p> <p>Client – WAPCOS Limited</p> <p>Position held: GIS Expert</p> <p>Location: Meghalaya</p> <p>Duration: 2020–2023</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Compile and Integrate existing and new spatial datasets (topographic maps, satellite imagery, cadastral data, DEMs).• Process remote sensing data to support land cover analysis, water bodies, and terrain mapping.• Support drone survey planning and integration if high-resolution local data is needed.• Develop detailed base maps for the project area including:• Rivers and tributaries• Roads and access routes• Settlements and land use• Vegetation cover and ecological zones• Generate contour maps and slope maps using Digital Elevation Models (DEM). |
| 8. | <p>Assignment Name: Appointment of Agency for review of DPR for MAHAMA Lot-1 Irrigation and Watershed Management Scheme under ETI Project (World Bank Funded)</p> <p>Client – WAPCOS Limited</p> <p>Position held: GIS Expert</p> <p>Location: Rwanda, Africa</p> <p>Duration: 2020–2020</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Critically review existing GIS and remote sensing components included in the DPR:• Catchment maps• Command area boundaries• Land use/land cover (LULC) classification• Watershed and sub-watershed delineations• Verify the accuracy and consistency of spatial data, coordinate systems, and mapping techniques used.• Evaluate the methodology used for watershed delineation, stream network generation, and terrain modeling.• Cross-validate hydrological unit boundaries (HUs) and check alignment with natural topography using DEMs.• Ensure that runoff generation zones, drainage patterns, and soil moisture zones are correctly mapped. |



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| 9. | <p>Assignment Name: Appointment of Agency for review of DPR for MAHAMA Lot-2 Irrigation and Watershed Management Scheme under ETI Project (World Bank Funded)</p> <p>Client – WAPCOS Limited</p> <p>Position held: GIS Expert</p> <p>Location: Rwanda, Africa</p> <p>Duration: 2020–2020</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Critically review existing GIS and remote sensing components included in the DPR;• Catchment maps• Command area boundaries• Land use/land cover (LULC) classification• Watershed and sub-watershed delineations• Verify the accuracy and consistency of spatial data, coordinate systems, and mapping techniques used.• Evaluate the methodology used for watershed delineation, stream network generation, and terrain modeling.• Cross-validate hydrological unit boundaries (HUs) and check alignment with natural topography using DEMs.• Ensure that runoff generation zones, drainage patterns, and soil moisture zones are correctly mapped. |
| 10. | <p>Assignment Name: Providing Expert Services for Design and Supervision of various Smart City Projects under Smart City Mission- Alzawl</p> <p>Client – WAPCOS Limited</p> <p>Position held: GIS Expert</p> <p>Location: Alzawl</p> <p>Duration: 2020–2020</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Conduct spatial analysis to support urban planning and zoning decisions, ensuring efficient land use and sustainable development.• Create and update land use maps to guide the allocation of space for residential, commercial, industrial, and recreational purposes.• Assist in planning the layout of essential infrastructure such as roads, water supply systems, sewage networks, and public transportation.• Conduct field surveys to collect geospatial data on various urban elements, including buildings, roads, utilities, and natural features.• Integrate data from various sources, including satellite imagery, aerial photography, and existing maps, into a centralized GIS database.• Maintain and update the GIS database to ensure the accuracy and currency of spatial data.• Develop GIS-based applications for traffic management, including real-time traffic monitoring, route optimization, and congestion management. |
| 11. | <p>Assignment Name: Providing Expert Services for Design and Supervision of various Smart City Projects under Smart City Mission (SCM-2) – Kohima</p> <p>Client – WAPCOS Limited</p> <p>Position held: GIS Expert</p> <p>Location: KOHIMA</p> <p>Duration: 2020 to 2020</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Conduct spatial analysis to support urban planning and zoning decisions, ensuring efficient land use and sustainable development.• Create and update land use maps to guide the allocation of space for residential, commercial, industrial, and recreational purposes.• Assist in planning the layout of essential infrastructure such as roads, water supply systems, sewage networks, and public transportation. |



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| | <ul style="list-style-type: none">Conduct field surveys to collect geospatial data on various urban elements, including buildings, roads, utilities, and natural features.Integrate data from various sources, including satellite imagery, aerial photography, and existing maps, into a centralized GIS database.Maintain and update the GIS database to ensure the accuracy and currency of spatial data.Develop GIS-based applications for traffic management, including real-time traffic monitoring, route optimization, and congestion management. |
| 12. | <p>Assignment Name: Development of River Basin Assessment and Plans for All Major River Basins in Uttar Pradesh Client – UP Water Management and Regulatory Commission Position held: Assistant General Manager -Remote Sensing & GIS Location: Uttar Pradesh Duration: 2016-2020</p> <p>Responsibilities:</p> <ul style="list-style-type: none">Develop the knowledge base for each sub-basin and administrative units (Districts and Blocks) in the 8 major basins in Uttar Pradesh (Yamuna, Ganga, Ramganga, Gomti, Ghaghara, Rapti, Gandak and Sone)Develop GIS-based spatial data compatible with existing commonly-used GIS systems (exportable to other systems).Delimitate all the Administrative layers including assembly constituency, all the drainage pattern, land-use/land-cover, basin boundary & sub-basin boundary & other hydrological spatial data (stream gauges, lake and reservoir gauges, ground water observation wells, environmental and ecological stations, etc.).Develop Detail Maps depicting Hydrological features of the basin, sub-basin and administrative units (Districts and Blocks)Develop Social assessment, Environment and Ecological maps for basin, sub-basin and administrative units (Districts and Blocks).For Phase-II area map should be 1:5000 scale and rest is 1:50000 |
| 13. | <p>Assignment Name: Consultancy Services for Monitoring, Management Information System and Evaluation of UPWSPR PHASE- II Client – Wapcos Ltd. Position held: Remote Sensing & GIS Expert Location: Uttar Pradesh Duration: 2014-2015</p> <p>Responsibilities:</p> <ul style="list-style-type: none">Development of Web GIS interface for Project Management and Monitoring Information System (PMMIS) which is web-based monitoring system for tracking project activitiesDevelop a knowledge base & develop standard queries (e.g. progress by component, activity, institution, month, year, canal system, block, district, etc.)on the monitoring knowledge base, with appropriate processing of data entered and generation of user-friendly reports, including graphs, schematic views (such as Gantt charts, schedules, etc.), and maps.This make use of GIS systems to facilitated spatial analysis and displayed the progress.Identifying data reporting mechanisms, including GIS components. |
| 14. | <p>Assignment Name: Survey and Redesign for the Rehabilitation and Modernization of Irrigation Infrastructure of Main Delivery Canal in Lower Ganga Canal (PLGC), Farrukhabad Client – Various Departments Position held: Remote Sensing & GIS Expert Location: Farrukhabad Duration: 2014-2015</p> <p>Responsibilities:</p> <ul style="list-style-type: none">Development of Digital Terrain Model (DTM) of strip area. Prepare a combine map with the location of the structures and relevant data on a GIS platform. |



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| | <ul style="list-style-type: none">Geolocalized photographs will be integrated to reflect the diagnostic. Topographic and Cadastral survey of area from Narora Head of the Canal to km 32 of LGC and PLGC to the extent of 500 meters from outer toe of the canal to study the seepage drainage system, water-logging and related investigation, using remote sensing techniques (high resolution satellite imageries).Survey and Plotting: Based on the control points established using DGPS/Total Station and height control by automatic level, longitudinal and cross-section surveys would be carried out capturing data of all topographical features using appropriate codes.In addition, levels will also be taken at all definable points such as ridges, valleys, depressions, canal structures, etc., in order to bring out the true shape of the terrain. The survey should be carried out using latest survey techniques.Longitudinal and cross-section surveys using latest survey techniques.Strip survey should be carried out & submitted first to redesign the canal as scheduled. |
| 15. | <p>Assignment Name: Revamping of Chambal Canal System CAD Kota Client: Rajasthan Govt, Position held: Remote Sensing & GIS Expert Location: Rajasthan Duration: 2013 to 2015 Responsibilities:</p> <ul style="list-style-type: none">Carry out GIS based topographical and cadastral survey in the gross command area.Mapping of the system including all irrigation, infrastructure and land features of the project area.Delineate land use features on a GIS format.Integrated multi-component cadastral output in the geo referenced grid system to minimize errors due to mismatching of village boundary, village and farmer's areas, roads canals etc.Development of WEB GIS module for end user & Client. |
| 16. | <p>Assignment Name: Preparation of Comprehensive and Integrated Detail Project report of renovation, Extension and Modernization of Sharda Canal project Client – MINISTRY OF WATER RESOURCES Position held: Remote Sensing & GIS Expert Location: Uttar Pradesh Duration: 2013 to 2015 Responsibilities:</p> <ul style="list-style-type: none">Collection of data of the Study area, hydrological MappingTopographical SurveySatellite based DEM model for mappinganalysis for Terrane Analysis Ground surveyLand Use Land Cover Mapping for Cropping pattern. |
| 17. | <p>Assignment Name: Possibility of Irrigation from Rivers (Jhim, Jhamura, Manusmara, Harda, Kantawa & Marha) Near Sonbarsa, Behra, Chandi Rajwara, Chikna, Bhima Mukteswar Client – Govt. of Uttarakhand Position held: GIS Expert Location: Uttarakhand Duration: 2013 to 2015 Responsibilities:</p> <ul style="list-style-type: none">Interim report on the possibility of irrigation from Adhawara group has been prepared by CWC which has provided preliminary analysis on the possibility of five irrigation schemes with limited data.CWC has commented that feasibility of these Irrigation scheme shall be verified and Detailed Project Report of these schemes shall be prepared using more authentic data and actual topographical survey information.MoWR has awarded the work to m/s WAPCOS Ltd. for the preparation of detailed project report of these irrigation schemes on various rivers of Adhawara Group in Sitamarhi District. |



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| | <ul style="list-style-type: none"> Collection the base line data with present status. Catchment analysis. Prepare a DEM through stereo paired Cartosat-I (2.5m resolution) Prepare a hydrological boundary through state of art GIA methodology, Command area delineation and prepare a 3rd level Land use/ land cover analysis. |
| 18. | <p>Assignment Name: Tamil Nadu Irrigated agriculture modernization and water resources management project.</p> <p>Client – Various Departments</p> <p>Position held: GIS Expert</p> <p>Location: Tamil Nadu</p> <p>Duration: Aug 2012 to Feb 2013</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> Develop a Monitoring and Evaluation Framework for the IAMWARM Project in consultation with MDPU and other implementing agencies. Prepare and undertake a baseline survey in collaboration with MDPU and other line departments to collect data on all project indicators using agreed upon (with MDPU) methodology for statistical sampling from basins and districts under the project. Track key indicators including input (both physical and financial), output and outcome indicators, and track changes to assess project progress and impacts (using controls to track with and without project for comparison) including various assessment reports, publications, PCRs etc. as may be required. Develop a user-friendly, interactive, web-based computerized Project Monitoring Information System (PMIS) for monitoring all TN IAMWARM Project activities. To enable better adaptive management. Strengthen the capacity of the project implementing agencies to monitor project impacts and use the PMIS by providing on-the-job training by using International best practices. |
| 19. | <p>Assignment Name: Benchmarking of Urban Water Supply Schemes of Rajasthan</p> <p>Client – Govt. of Rajasthan</p> <p>Position held: GIS Expert</p> <p>Location: Rajasthan</p> <p>Duration: July 2007 to Feb 2013</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> Preparation of inventory of all existing sources (operational and defunct) including the traditional sources and marking their respective locations in GIS map using user friendly software. Preparation of zone-wise maps of distribution system of the town on 1cm=120m scale and digitization. The entire work will be extended to GIS platform with spatial and non-spatial data wherein the assets shall be geo referenced using GPS enabled devices, developing maps and atlas as well as Remote Sensing data analysis. Marking of all assets, service lines and property connections on GIS maps and assigning attributes (to be decided in consultation with PHED) to each unit. Customization of map viewing software which are usages by Govt dept. of Rajasthan. |

Expert's contact information: (e-mail: shanty12feb@gmail.com phone: +91 75260 01226)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Dr. Santosh Kumar Singh

24.06.2025



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Name of Expert

Santosh Kumar Singh

Date



Arvind Kumar Dheer-AGM Tender

Name of authorized
Representative of the Consultant

Signature

24.06.2025

Date



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मंत्रालय सरकार
अन्तरिक्ष विभाग
गांधीजी अनुसंधान संगठन
राष्ट्रीय प्राकृतिक संसाधन प्रबन्ध प्रणाली
प्रदर्शनीक सुदूर उपर्युक्त सेवा केन्द्र
कलवरी परिसर, जोधपुर - 342 003 (राजस्थान)
फ़ॉक्स: 0291-2740000, फॉक्स: 0291-2741516



Government of India
Department of Space
Indian Space Research Organisation
National Natural Resources Management System
REGIONAL REMOTE SENSING SERVICE CENTRE
CAZRI Campus, Jodhpur - 342 003 (Rajasthan)
Telephone: 0291-2742264 Fax: 0291-2741516

CERTIFICATE

This is to certify that SHRI SANTOSH KUMAR SINGH, Student of M.G.C.G. Vishwavidhyalaya, Chitrakoot (MP) has successfully completed training programme on "Application of Remote Sensing and GIS for Ground Water Studies and Decision Support System (DSS)" conducted at Regional Remote Sensing Service Centre, Jodhpur, under the aegis of Ground Water Management Project (GWD, Govt. of Rajasthan, Jodhpur) during 22-26 August, 2005.


(Dr. B.K. Bhadra)
Course Co-ordinator


(Dr. J.R. Sharma)
Head & Project Director



भारत सरकार
मन्त्रीपरिषद नियम
लैटिट अन्तर्राष्ट्रीय विद्यालय
प्रोवेशिक मुद्रा संचेदन सेवा केन्द्र
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Department of Space
National Remote Sensing Agency
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Telephone : +91-291-2740004
Fax : +91-291-2741516

No. RCJ: 05.1/2005

September 13, 2005

CERTIFICATE

This is to certify that **MR. SANTOSH KUMAR SINGH**, student of M.Sc. (Remote Sensing & GIS), M.G.C.G, Vishwavidyalaya, Chitrakoot, Satna (M.P.) has successfully completed the project training at this Centre under the supervision of Dr. Rakesh Paliwal, Scientist/Engineer 'SD', during the period June, 2005 to September, 2005.

He has completed the project entitled "Land use / land cover and drought assessment of Jodhpur district, Rajasthan using Remote Sensing and GIS techniques" during this period. The performance of the candidate during the training was Very Good.

(Dr. Rakesh Paliwal)
Scientist/Engineer 'SD'

(Dr. J.R. Sharma)
Head & Project Director

भारतीय अन्तरिक्ष अनुसंधान संगठन Indian Space Research Organisation



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**MAHATMA GANDHI CHITRAKOOT GRAMODAYA VISHWAVIDYALAYA
CHITRAKOOT, SATNA (M.P.)**



Provisional Degree Certificate

This is to certify that on the basis of reports submitted by the examiners and subsequent Viva-Voce examination and approved by the Vice-chancellor on 28.05.2018, Santosh Kumar Singh eligible for the award of degree of DOCTOR OF PHILOSOPHY of this University under the Faculty of Science & Environment (Subject: Remote Sensing & GIS).

The title of his/her thesis: GEOSPATIAL ANALYSIS OF DEGRADING AGRICULTURE IN JAUNPUR BRANCH CANAL COMMAND (JBC) UTTAR PRADESH

Date : 28 -05-2018

Dy. Registrar (Exam.)

Dy. Registrar (Exam.)
Mahatma Gandhi Chitrakoot Gramodaya Vishwavidyalaya
Chitrakoot, SATNA (M.P.)



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No. 2704



**MATATHMA GANDHI CHITRAKOOT GRAMODAYA VISWAVIDYALAYA
CHITRAKOOT - SATNA (MP)**

**M.Sc. (REMOTE SENSING & GIS)
FOURTH SEMESTER EXAMINATION : 2004-2005**

MARKSHEET

NAME - SANTOSH KUMAR SINGH
FATHER'S NAME - SHRI S. N. SINGH

ROLL NO. 09
Enrol. No. 55264

| SN. | SUBJECT/PAPER | CREDIT | CFA | ESE | TOTAL | POINT SCALE | GRADE POINT |
|-----|---|--------|-----|-----|-------|-------------|-------------|
| 1. | SOFTWARE ENGINEERING | 03 | 27 | 47 | 74 | 7.4 | 22.2 |
| 2. | JAVA PROGRAMMING | 03 | 25 | 36 | 61 | 6.1 | 18.3 |
| 3. | ELECTIVE - GIS FOR ENVIRONMENTAL IMPACT ASSESSMENT | 03 | 27 | 35 | 62 | 6.2 | 18.6 |
| 4. | ELECTIVE - ENVIRONMENTAL SYSTEM ANALYSIS AND MANAGEMENT | 03 | 27 | 47 | 74 | 7.4 | 22.2 |
| 5. | PROGRAMMING LAB | 04 | 26 | 63 | 89 | 8.9 | 35.6 |
| 6. | PROJECT WORK | 16 | | | 93 | 9.3 | 48.8 |
| ** | TOTAL CREDIT | 32 | | | | | 205.7 |
| *** | GPA | - | | | | | 8.3 |
| *** | TGP UPTO THIRD SEMESTER | 82 | | | | | 659.3 |
| *** | TGP UPTO FOURTH SEMESTER | 114 | | | | | 923.0 |
| *** | CGPA | - | | | | | 8.1 |

**RESULT - PASSED
FAILED PAPER(S) - NIL**

DIVISION - FIRST

- ◆ Minimum Pass Marks - For Theory and Practical - ESE = 40%, CFA = ESE = 50%
- ◆ CFA - Continuous Formative Assessment, ESE - End Semester Examination
- ◆ TGP - Total Grade Point, CPA - Grade Point Average, CGPA - Over All Grade Point Average
- ◆ CGPA : 8.5 to 10.0 First Class with Distinction, 6.5 to 8.4 First Class, 5.00 to 6.4 Second Class

Date: 23 JUN 2006

Prepared by:

Checked by:

Auth. Registrar



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Date: 24th June, 2025

To,
M/s Pureways Infra Private Limited
FH-1, A Block, Vardhman Plaza,
Mangalam Place, Rohini Sector-3, New Delhi-110085

I, Dr. Santosh Kumar Singh, the undersigned, confirm to provide my consent exclusive to M/s Pureways Infra Private Limited having its registered office at FH-1, A-Block, Vardhman Plaza, Mangalam Place, Rohini Sector-3, New Delhi-110018 for proposing my CV as Key expert for the proposed project "Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs and Operational Assistance in Uttarakhand State under U-PREPARE Project" I also declare that I have not given my consent for the above-mentioned project to any organization/Firm.

I also confirm that my attached CV is true to the best of my knowledge and experience, and can be utilized for furnishing the proposal for the aforementioned project.

Signature (Full): *Santosh Kumar Singh*

Name: Dr. Santosh Kumar Singh
Contact Number: +91 75260 01226



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FORM TECH-6: CURRICULUM VITAE (CV)

| | |
|---|-------------------------------|
| Position Title and No. | K-4-Structural Engineer |
| Name of Expert: | Vivek Sood |
| Date of Birth: | 21 st October 1972 |
| Country of Citizenship/Residence | Indian |

Education:

| Qualification | Institution | Duration |
|------------------------------------|---|----------|
| M. Tech. in Structural Engineering | Regional Engineering College, Kurukshetra | 2005 |
| B.E. in Civil Engineering | Regional Engineering College, Durgapur | 1994 |

Employment record relevant to the assignment:

| Period | Employing organization and your title/ position. Contact in for references | Location | Summary of activities performed relevant to the Assignment |
|----------------|---|----------------|--|
| 2019-Till Date | Organization: - Pureways Infra Private Limited Position: - Structural Design Expert | Delhi India | <ul style="list-style-type: none"> • Conduct a thorough assessment of existing structures in the Janpath Chamoli area to determine their structural integrity and identify any potential weaknesses. • Design foundations for new structures, considering the soil conditions obtained from the detailed survey. Ensure that the foundations can support the loads and resist potential hazards like earthquakes • Consider the seismic risk of the region and implement seismic design principles to ensure that structures can withstand earthquake forces. • Develop structural design criteria for key dam components: • Main dam body (earthen/concrete/rockfill depending on final alignment) • Spillway, sluice, and intake structures • Energy dissipation structures (e.g., stilling basins, flip buckets) • Galleries, outlets, and control structures |
| 2004-2019 | Organization: - Intercontinental Consultants and Technocrats Pvt. Ltd. (ICT) Position: - Senior Structural Engineer | India | <ul style="list-style-type: none"> • Design and analysis of a variety of structures, such as regulating structures (Head Regulator, Cross Regulator, Fall etc) along with large bridges, DRB, VRB, PRB etc. and Carry out changes in the design and drawings due to site constraints • Responsible for organizing surveys and investigations; • Condition survey of existing bridges and cross-drainage structures and Planning and monitoring of subsoil and hydraulic investigations and interpretation of results and using the same in determining the waterway, span |



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| Period | Employing organization and your title/ position. Contact in for references | Location | Summary of activities performed relevant to the Assignment |
|-----------|--|----------|--|
| | | | <p>arrangement</p> <ul style="list-style-type: none"> • Finalization of options for rehabilitation / widening of bridges based on condition survey of old bridges at various places whenever required; • Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure; Finalizing detailed technical specifications; • Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report; • Finalizing cost estimates and tender documents. During Construction Supervision Projects, has been responsible for review of design and making necessary modification using computer aided design software; • Construction Supervision of bridges and other structures which involved checking and verification of setting out of bridges and other structures; Approval and issuing of working drawings; Monitor progress of the project; Checking of measurements; Verify and certify 'as-built' drawings; Imparting on-the-job training to counterpart staff; and preparation of various reports |
| 2003-2004 | <p>Organization: - MSV International Inc. USA, New Delhi</p> <p>Position: -</p> <ol style="list-style-type: none"> 1. Sr. Bridge Design Engineer) | India | <ul style="list-style-type: none"> • Design and analysis of a variety of structures, such as regulating structures (Head Regulator, Cross Regulator, Fall etc) along with large bridges, DRB, VRB, PRB etc. and Carry out changes in the design and drawings due to site constraints • Responsible for organizing surveys and investigations; • Condition survey of existing bridges and cross-drainage structures and Planning and monitoring of subsoil and hydraulic investigations and interpretation of results and using the same in determining the waterway, span arrangement • Finalization of options for rehabilitation / widening of bridges based on condition survey of old bridges at various places whenever required; • Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure; Finalizing detailed technical specifications; |





| Period | Employing organization and your title/ position. Contact in for references | Location | Summary of activities performed relevant to the Assignment |
|-----------|--|----------|---|
| | | | <ul style="list-style-type: none"> • Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report; • Finalizing cost estimates and tender documents. During Construction Supervision Projects, has been responsible for review of design and making necessary modification using computer aided design software; • Construction Supervision of bridges and other structures which involved checking and verification of setting out of bridges and other structures; Approval and issuing of working drawings; Monitor progress of the project; Checking of measurements; Verify and certify 'as-built' drawings; imparting on-the-job training to counterpart staff; and preparation of various reports |
| 1995-2003 | Organization: - Intercontinental Consultants and Technocrats Pvt. Ltd. (ICT), Position: - Bridge Engineer | India | <ul style="list-style-type: none"> • Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure; Finalizing detailed technical specifications; • Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report; • Finalizing cost estimates and tender documents. During Construction Supervision Projects, has been responsible for review of design and making necessary modification using computer aided design software; • Construction Supervision of bridges and other structures which involved checking and verification of setting out of bridges and other structures; Approval and issuing of working drawings; Monitor progress of the project; Checking of measurements; Verify and certify 'as-built' drawings; imparting on-the-job training to counterpart staff; and preparation of various reports |
| 1994-1995 | Organization: - M.B. Consultants, Durgapur Position: - Senior Engineer | | <ul style="list-style-type: none"> • Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure; Finalizing detailed technical specifications; • Preparation and finalization of detailed working drawings for all components of bridges using computer |





| Period | Employing organization and your title/ position. Contact in for references | Location | Summary of activities performed relevant to the Assignment |
|--------|--|----------|--|
| | | | <p>aided bridge design software viz. STADD / Auto CADD; Preparation of final design report;</p> <ul style="list-style-type: none"> Finalizing cost estimates and tender documents. During Construction Supervision Projects, has been responsible for review of design and making necessary modification using computer aided design software; Construction Supervision of bridges and other structures which involved checking and verification of setting out of bridges and other structures; Approval and issuing of working drawings; Monitor progress of the project; Checking of measurements; Verify and certify 'as-built' drawings; Imparting on-the-job training to counterpart staff; and preparation of various reports |

Membership in Professional Associations and Publications:

- A. Member, Consulting Engineers Association of India
 B. Member, Indian Roads Congress

Language Skills (indicate only languages in which you can work):

| Languages | Speaking | Reading | Writing |
|-----------|----------|-----------|-----------|
| English | Fluent | Excellent | Excellent |
| Hindi | Fluent | Excellent | Excellent |

Adequacy for the Assignment:

| S. No | Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks |
|-------|--|
| 1. | <p>Assignment Name: Engaging Consulting Services for Preparation of Detailed Project Report for Preparation of Drainage Plan for Joshimath Town, Chamoli, Uttarakhand Client – Uttarakhand Peyjal Sanselan Vikas Evam Nirman Nigam Position held: Structural Design Expert Location: Uttarakhand Duration: Jan 2024 to May 2025 Responsibilities:</p> <ul style="list-style-type: none"> Conduct a thorough assessment of existing structures in the Janpath Chamoli area to determine their structural integrity and identify any potential weaknesses. Design foundations for new structures, considering the soil conditions obtained from the detailed survey. Ensure that the foundations can support the loads and resist potential hazards like earthquakes. Consider the seismic risk of the region and implement seismic design principles to ensure that structures can withstand earthquake forces. |





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| 2. | <p>Assignment Name: Project Management Consultant (PMC) for Assisting the Udaipur Smart City Ltd. to Design, Develop, Manage and Implementation of Smart City Project Under the Smart City Mission (SCM)</p> <p>Client – Udaipur Smart City Limited</p> <p>Position held: Structural Design Expert</p> <p>Location: Udaipur</p> <p>Duration: 2022–2024</p> <p>Responsibilities:</p> <ul style="list-style-type: none">▪ Review structural designs, drawings, and calculations submitted by consultants or contractors for various smart city components (e.g., smart roads, urban plazas, utility buildings, foot over-bridges, multilevel parking)▪ Ensure structural designs comply with<ul style="list-style-type: none">▪ Indian Standards (IS codes)▪ NBC 2016 (National Building Code)▪ Earthquake zone considerations (Udaipur lies in Seismic Zone II/III)▪ ULB norms and safety standards▪ Provide value engineering inputs and suggest design optimizations to reduce cost, enhance durability, and improve constructability.▪ Assist in preparing or modifying structural layouts and reinforcement detailing where needed.▪ Ensure design integration with architectural, MEP, and smart components |
| 3. | <p>Assignment Name: Appointment of Agency for review of DPR for MAHAMA Lot-1 Irrigation and Watershed Management Scheme under ETI Project (World Bank Funded)</p> <p>Client – WAPCOS Limited</p> <p>Position held: Structural Design Expert</p> <p>Location: Rwanda, Africa</p> <p>Duration: 2020–2020</p> <p>Responsibilities:</p> <ul style="list-style-type: none">▪ Review the designs, drawings, and structural calculations for irrigation-related structures, including:<ul style="list-style-type: none">▪ Diversion weirs▪ Head regulators▪ Canal linings▪ Cross-drainage structures (culverts, aqueducts, siphons)▪ Check dams, drop structures, and embankments▪ Outlet structures and distribution chambers▪ Verify that designs consider hydraulic loads, soil conditions, seismic zones, and flood levels.▪ Ensure that structural components are designed per:<ul style="list-style-type: none">▪ Indian Standards (IS Codes) such as IS 456 (RC design), IS 3370 (water-retaining structures), IS 1893 (earthquake), IS 875 (loads)▪ IRC standards (where applicable to rural roads or culverts)▪ World Bank Environmental and Social Framework (ESF) where relevant to structural safety and resilience |
| 4. | <p>Assignment Name: Appointment of Agency for review of DPR for MAHAMA Lot-2 Irrigation and Watershed Management Scheme under ETI Project (World Bank Funded)</p> <p>Client – WAPCOS Limited</p> <p>Position held: Structural Design Expert</p> <p>Location: Rwanda, Africa</p> <p>Duration: 2020–2020</p> <p>Responsibilities:</p> <ul style="list-style-type: none">▪ Review the designs, drawings, and structural calculations for irrigation-related structures, including: |





- Diversion weirs
- Head regulators
- Canal linings
- Cross-drainage structures (culverts, aqueducts, siphons)
- Check dams, drop structures, and embankments
- Outlet structures and distribution chambers
- Verify that designs consider hydraulic loads, soil conditions, seismic zones, and flood levels.
- Ensure that structural components are designed per:
- Indian Standards (IS Codes) such as IS 456 (RC design), IS 3370 (water-retaining structures), IS 1893 (earthquake), IS 875 (loads)
- IRC standards (where applicable to rural roads or culverts)
- World Bank Environmental and Social Framework (ESF) where relevant to structural safety and resilience

5. Assignment Name: Providing Expert Services for Design and Supervision of various Smart City Projects under Smart City Mission- Aizawl

Client – WAPCOS Limited

Position held: Structural Design Expert

Location: Aizawl

Duration: 2019–2020

Responsibilities:

- Provide detailed structural design for a variety of Smart City Infrastructure such as:
- Smart roads and walkways
- Multi-level car parking structures
- Foot over bridges and retaining walls
- Smart bus shelters, kiosks, and public toilets
- Utility ducts and underground infrastructure
- Design must consider Aizawl's steep topography, landslide risks, and heavy rainfall conditions
- Ensure all designs are earthquake-resistant, compliant with IS 1893 (seismic design), IS 456, and other relevant Indian codes.
- Analyze slope stability and structural safety for elevated structures or those on hillsides.
- Recommend retaining wall types, deep foundations, or pile systems where needed.

6. Assignment Name: Providing Expert Services for Design and Supervision of various Smart City Projects under Smart City Mission (SCM-2) – Kohima

Client – WAPCOS Limited

Position held: Structural Design Expert

Location: KOHIMA

Duration: 2019 to 2020

Responsibilities:

- Provide design and engineering support for smart infrastructure components, such as:
- Urban mobility infrastructure (e.g., smart roads, bridges, foot over bridges)
- Multi-level parking structures
- Smart bus terminals, kiosks, and e-toilet blocks
- Public plazas, retaining walls, viewing decks, and skywalks
- Utility ducting systems and pedestrian walkways
- Ensure structural safety under topographic constraints, including steep slopes and limited buildable land.
- Design and review all structures for earthquake resistance as per:
- IS 1893 – Criteria for earthquake-resistant design
- IS 456, IS 13920 – Ductile detailing for reinforced concrete





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| | <ul style="list-style-type: none">Address landslide risks, soil instability, and drainage issues inherent in hilly regions like Kohima |
| 7. | <p>Assignment Name: Preparation of Detailed project report (DPR) for Right Bank Canal and Integrating the DPR for Clarence from CWC for Tapi Mega Recharge Scheme, Maharashtra of ground water recharge scheme in TAPI Alluvial Basin Maharashtra. (Total CCA – 1,85,724 Hectare).</p> <p>Client – WAPCOS Limited</p> <p>Position held: Structural Design Expert</p> <p>Location: Maharashtra</p> <p>Duration: 2019 – 2020</p> <p>Responsibilities:</p> <ul style="list-style-type: none">Structural Design and analysis of different structures, such as Dam, Canal regulating structures (Head Regulator, Cross Regulator, Fall etc) along with large bridges, DRB, VRB, PRB etc.Carry out changes in the design and drawings due to site constraints and Responsible for organizing surveys and investigations; |
| 8. | <p>Assignment Name: Detailed Design and DPR for Remodelling / Rectification/Reconstruction of existing structure and New structure to accommodate Head losses on north Koel Right Main Canal.</p> <p>Client – WAPCOS Limited</p> <p>Position held: Structural Design Expert</p> <p>Location: Jharkhand</p> <p>Duration: 2019 – 2019</p> <p>Responsibilities:</p> <ul style="list-style-type: none">Design and analysis of different Canal structures like Head Regulator, Cross Regulator, Fall etc. along with large bridges, DRB, VRB, PRB etc.Carry out changes in the design and drawings due to site constraints and Responsible for organizing surveys and investigations;Condition survey of existing bridges and cross-drainage structures and Planning and monitoring of subsoil and hydraulic investigations and interpretation of results and using the same in determining the waterway, span arrangement and fixing the type and level of foundation for the bridge;Preparation and finalization of detailed working drawings for all components of structures using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report;Finalizing cost estimates and tender documents. During Construction Supervision Projects, has been responsible for review of design and making necessary modification using computer aided design software; |





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| 9. | <p>Assignment Name: Preparation of detailed project report (DPR) for command area development of Karma distributary in district Aurangabad (Block Kutumba) having CCA of 12150 Ha. In North Koel CADWM project (Bihar Portion).</p> <p>Client – WAPCOS Limited</p> <p>Position held: Structural Design Expert</p> <p>Location: Bihar</p> <p>Duration: 2019 – 2020</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Design and analysis of different structures planned for the command area planning like turn outs, pump rooms, Desilting chambers etc.• Preparation and finalization of detailed working drawings for all components of structures using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report;• Finalizing cost estimates and tender documents. During Construction Supervision Projects, has been responsible for review of design and making necessary modification using computer aided design software. |
| 10. | <p>Assignment Name: World Bank funded project for Survey and Redesign for the Rehabilitation and Modernization of Irrigation infrastructure in Kanpur Branch Canal, West Allahabad Branch Canal and Fatehpur Branch Canal of Lower Ganga Canal System of Package - B" Under U.P. Water Sector Restructuring Project</p> <p>Client – Govt. of Uttar Pradesh</p> <p>Position held: Senior Structural Engineer</p> <p>Location: Uttar Pradesh</p> <p>Duration: 2016-2019</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Design and analysis of different Canal structures like Head Regulator, Cross Regulator, Fall etc. along with large bridges, DRB, VRB, PRB etc.• Carry out changes in the design and drawings due to site constraints and Responsible for organizing surveys and investigations;• Preparation of DPRs for modernization of Irrigation project as per the latest guidelines of central water commission. |
| 11. | <p>Assignment Name: Project Management Consulting Services for Construction of Double line Electrified (2x25KV) Railway Track complete with Signalling & Telecommunication system and related infrastructure for Khurja – Dadri section (Approx. 46 Route Kms) of Eastern Dedicated Freight Corridor.</p> <p>Client – Dedicated Freight Corridor Corporation of India Limited</p> <p>Position held: Senior Structural Engineer</p> <p>Location: Uttar Pradesh</p> <p>Duration: 2016-2019</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Review of design prepared by the contractor including drawing and specifications,• superintendence of the contractor's performance including performance on day-to-day basis under the contract progress monitoring,• Technical and quality control through inspection and witness of testing during manufacturing, FAT, Installation including field checks of materials and equipment installed and workmanship, ensuring work site safety, ensuring work site implementation of safety and environment management plans and other special plans,• evaluation and certification for stage payment of construction, suggesting remedial measures, certification for completion of works by the DB works contractors and duties related to taking over and |





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| | <p>defects liability period</p> <ul style="list-style-type: none"> Construction Supervision of bridges and other structures which involved checking and verification of setting out of bridges and other structures; Approval and issuing of working drawings; Monitor progress of the project; Checking of measurements; |
| 12. | <p>Assignment Name: Preparation of DPR for Development of Economic Corridors, Inter Corridors, Feeder Routes and Coastal Roads to Improve the Efficiency of Freight Movement in India (Lot-1/Madhya Pradesh/Package – 5)</p> <p>Client – PIU (R&B), UDRP</p> <p>Position held: Senior Structural Engineer</p> <p>Location: Uttarakhand</p> <p>Duration: 2014-2016</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure; Finalizing detailed technical specifications; Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report; Finalizing cost estimates and tender documents. During Construction Supervision Projects, has been responsible for review of design and making necessary modification using computer aided design software. |
| 13. | <p>Assignment Name: Project Management Phase-I Including Preparation of Detailed Project Report for up gradation of Junction with NH 68 at Sanchore connecting Dhanera and terminating at its junction with NH 27 near Deesa + Junction with NH 68 near Tharad connecting Dhanera, Panthvada section of NH-168A and NH-168 (Total length: 136 km) in the State of Gujarat to Two / Four lane with Paved Shoulder configuration (Package No. NH/IAME/19)</p> <p>Client – Indian Academy of Highway Engineers</p> <p>Position held: Senior Structural Engineer</p> <p>Location: Gujarat</p> <p>Duration: 2015-2016</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure; Finalizing detailed technical specifications; Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report; Finalizing cost estimates and tender documents. During Construction Supervision Projects, has been responsible for review of design and making necessary modification using computer aided design software. Construction Supervision of bridges and other structures which involved checking and verification of setting out of bridges and other structures; Approval and issuing of working drawings; Monitor progress of the project; Checking of measurements; Verify and certify 'as-built' drawings; imparting on-the-job training to counterpart staff; and preparation of various reports |
| 14. | <p>Assignment Name: Detailed Engineering Design of Uttarakhand Disaster Recovery Project - Package No. UDRP/PWD/B/DSC/01, Credit No. 5313-IN, funded by IBRD/IDA (World Bank).</p> <p>Client – PIU (R&B), UDRP.</p> <p>Position held: Senior Structural Engineer</p> <p>Location: Uttarakhand</p> |





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| | <p>Duration: 2014-2016</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> Condition survey of existing bridges and cross-drainage structures and Planning and monitoring of subsoil and hydraulic investigations and Interpretation of results and using the same in determining the waterway, span arrangement Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure; Finalizing detailed technical specifications; Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report; |
| 15. | <p>Assignment Name: Preparation of Detailed Project Report for Upgradation of Selected Stretches of National Highways in the State of Rajasthan – Package (Phalodi – Jaisalmer) NH-15</p> <p>Client – National Highways Authority of India</p> <p>Position held: Senior Structural Engineer</p> <p>Location: Rajasthan</p> <p>Duration: 2012-2014</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure; Finalizing detailed technical specifications; Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report; Finalizing cost estimates and tender documents. During Construction Supervision Projects, has been responsible for review of design and making necessary modification using computer aided design software. |
| 16. | <p>Assignment Name: Preparation of Detailed Project Report (including Feasibility Report) for Rehabilitation and Upgradation of NH-233 from India / Nepal Border to Varanasi Section (length 292 km including 170 km of 4-lane, 122 km of 2-lane with paved shoulders) under NHDP-IVB (Package No. NHA/UP/DPR/NHDP-IV/02)</p> <p>Client – National Highways Authority of India</p> <p>Position held: Senior Structural Engineer</p> <p>Location: Uttar Pradesh</p> <p>Duration: 2010-2012</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> Condition survey of existing bridges and cross-drainage structures and Planning and monitoring of subsoil and hydraulic investigations and interpretation of results and using the same in determining the waterway, span arrangement Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure; Finalizing detailed technical specifications; Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report. |
| 17. | <p>Assignment Name: Preparation of Detailed Project Report for ADB Phase - II Roads Package-II, South Bihar (ADB funded)</p> <p>Client – Road Construction Department (RCD)</p> <p>Position held: Senior Structural Engineer</p> |





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| | <p>Location: Bihar Duration: 2008-2010 Responsibilities:</p> <ul style="list-style-type: none"> • Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure; Finalizing detailed technical specifications; • Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; • Preparation of final design report; • Finalizing cost estimates and tender documents. • During Construction Supervision Projects, has been responsible for review of design and making necessary modification using computer aided design software. |
| 18. | <p>Assignment Name: Preparation of Detailed Engineering Design for strengthening of 2 lane and construction of new two lane from km 31 to km 193 (Barasat to Baharampur) (length: 162 km) of NH-34 in West Bengal, India (ADB Loan No. 1870 - IND); Location: West Bengal Client – Ministry of Shipping, Road Transport & Highways Position held: Senior Structural Engineer Location: West Bengal Duration: 2005-2008 Responsibilities:</p> <ul style="list-style-type: none"> • Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure; Finalizing detailed technical specifications; • Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; • Preparation of final design report; • Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report |
| 19. | <p>Assignment Name: Feasibility study and Detailed Engineering Design for strengthening of 2 lane and construction of new two lane of NH-26 (Rajmarg Chauraha to Lakhandan Section) in Madhya Pradesh, India. Client – National Highways Authority Position held: Sr. Bridge Design Engineer Location: Madhya Pradesh Duration: 2003-2004 Responsibilities:</p> <ul style="list-style-type: none"> • Condition survey of existing bridges and cross-drainage structures and Planning and monitoring of subsoil and hydraulic investigations and Interpretation of results and using the same in determining the waterway, span arrangement • Finalizing design standards; • Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, • substructure and superstructure; • Finalizing detailed technical specifications; • Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report. |





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| 20. | <p>Assignment Name: Planning, feasibility study and detailed engineering design for upgrading of roads and bridges in the districts of Kamrup, Darrang and Cachar in Assam under ARIASP Client – PWD, Govt. of Assam Position held: Sr. Bridge Design Engineer Location: Assam Duration: 1998-2002 Responsibilities:</p> <ul style="list-style-type: none">▪ Finalizing design standards; Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation;▪ substructure and superstructure;▪ Finalizing detailed technical specifications;▪ Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report |
| 21. | <p>Assignment Name: Detailed engineering design and construction supervision of Section B (Chowk to Sanjaon- Adoshi) of 6-lane of 16 km of Mumbai - Pune Expressway in Maharashtra State Client – Maharashtra State Road Development Corporation Position held: Sr. Bridge Design Engineer Location: Maharashtra Duration: 1995-1997 Responsibilities:</p> <ul style="list-style-type: none">▪ Condition survey of existing bridges and cross-drainage structures and Planning and monitoring of subsoil and hydraulic investigations and interpretation of results and using the same in determining the waterway, span arrangement▪ Finalizing design standards;▪ Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure;▪ Finalizing detailed technical specifications;▪ Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report.▪ Preparation and finalization of detailed working drawings for all components of bridges using computer aided bridge design software viz. STADD / Auto CADD; Preparation of final design report. |
| 22. | <p>Assignment Name: Feasibility Study, Detailed Engineering Design and Construction Supervision of 13 bridges including their approaches and balance road works between km 121.00 to km 126.25, Ataria to Karnali Bridge Section of Kohalpur-Mahakali Highway, Nepal Client – Ministry of External Affairs Position held: Bridge Engineer Location: Nepal Duration: 1994-1995 Responsibilities:</p> <ul style="list-style-type: none">▪ Condition survey of existing bridges and cross-drainage structures and Planning and monitoring of subsoil and hydraulic investigations and interpretation of results and using the same in determining the waterway, span arrangement▪ Finalizing design standards;▪ Analysis and design of bridges (concrete as well as steel bridges) and CD structures including their foundation, substructure and superstructure;▪ Finalizing detailed technical specifications;▪ Preparation and finalization of detailed working drawings for all components of bridges using computer |





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| | aided bridge design software viz. STADD / Auto CADD; Preparation of final design report. |
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Expert's contact information: (Email id: viveksood72@gmail.com phone: +91-9958007356)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of a Contract award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification, dismissal by the Client, and/or sanctions by the Bank.

Vivek Sood

Vivek Sood

24.06.2025

Name of Expert

Signature

Date

Arvind Kumar Dheer-AGM Tender



24.06.2025

Name of Authorized Representative
of the Consultant

Signature

Date



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प्रमाणित
Serial No.

10

1529



क्रमांक:
Roll No.

12K 7/3

बनुक्षेत्र विद्यालय
Regn. No.

NC-A36

कुरुक्षेत्र - विश्वविद्यालयः

(1956 राज्य-विधानसभा-अधिनियम-XII-द्वारा स्थापितः)

मास्टर ऑफ इंजीनियरिंग

(सिविल इंजिनियरिंग)

इदमप्र स्नातीक्ष्ण्यते वसु विकेत चूल्हा
ली अनंत भक्त चूल्हा महोदयस्य पुत्रः/पुत्री 2005.
तज्ज्ञ संवरप्त्ते रीजिनेल-इंजिनियरिंग-कॉलेज-कुरुक्षेत्रलोडस्य विश्वविद्यालयस्य परीक्षा-प्राप्ति
क्षेत्रीय समूहीय मास्टर-ऑफ-इंजीनियरिंग (सिविल इंजिनियरिंग) इस्युपाधिना
समाप्तिकृत/समाप्ताकृता-इति।

Kurukshetra University

(Established by the State Legislature Act XII of 1956)

Master of Technology
(Civil Engineering)

This is to certify that Virendra Singh,
son/daughter of Shri Om Prakash Singh, and
of the Regional Engineering College Kurukshetra, has obtained
the degree of Master of Technology (Civil Engineering)
from this University, having passed the examination
for the said degree held in September 2005,
in the First Division.

Virendra Singh

Rector

AK Kadian

Registrar

कुरुक्षेत्र

K. Chawla

कुरुक्षेत्र

K. Chawla

कुरुक्षेत्र

Kurukshetra Dated, Nov. 08, 2006

प्रमाणित तिथि 10 नवम्बर, 2006



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THE UNIVERSITY OF BURDWAH



This is to certify that

Wiseek Sood

obtained the Degree of Bachelor of Engineering
in this University at the Examination of 1994

held in 1994, the special branch in which he/she
was examined having been Civil Engineering and
that he/she was placed in the First class.

Rajlakhi, Burdwan
The 25th Feb. 1995



J. K. Banerjee
Vice-Chancellor

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Date: 24th June, 2025

To,
M/s Pureways Infra Private Limited
FH-1, A Block, Vardhman Plaza,
Mangalam Place, Rohini Sector-3, New Delhi-110085

I, Vivek Sood, the undersigned, confirm to provide my consent exclusive to M/s Pureways Infra Private Limited having its registered office at FH-1, A-Block, Vardhman Plaza, Mangalam Place, Rohini Sector-3, New Delhi-110018 for proposing my CV as Key expert for the proposed project "Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs and Operational Assistance in Uttarakhand State under U-PREPARE Project" I also declare that I have not given my consent for the above-mentioned project to any organization/Firm.

I also confirm that my attached CV is true to the best of my knowledge and experience, and can be utilized for furnishing the proposal for the aforementioned project.

Vivek Sood
Signature (Full):

Name: Vivek Sood
Contact Number: 9958007356



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FORM TECH-6: CURRICULUM VITAE (CV)

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| Position Title and No. | K-5- Architect |
| Name of Expert: | Nishant Saxena |
| Date of Birth: | 03.07.1992 |
| Country of Citizenship/Residence | Indian |

Education:

| Qualification | Institution | Duration |
|-------------------------|---|----------|
| M. Arch | Abdul kalam Technical University, | 2018, |
| B. Arch | SPSAD, Rohtak, | 2016 |
| Diploma in Architecture | RAO TULA RAM POLYTECHNIC South Campus in Delhi under Board Technical Education, | 2011 |

Employment record relevant to the assignment:

| Period | Employing organization and your title/ position. Contact in for references | Location | Summary of activities performed relevant to the Assignment |
|----------------|--|----------|--|
| 2019-Till Date | Organization: Pureways Infra Pvt. Ltd. Position: Sr. Architect | India | <ul style="list-style-type: none"> • Provided expert input during the detailed survey of Joshimath Nagar, focusing on spatial mapping of vulnerable zones, unauthorized constructions, and infrastructure under environmental stress. • Assessed urban form, density, and built-environment patterns contributing to land instability and drainage challenges. • Proposed zoning modifications and relocation strategies for structures in high-risk areas, with architectural solutions that are contextually appropriate • Contributed to the development of sustainable architectural design frameworks that account for: <ul style="list-style-type: none"> ➢ The fragile Himalayan terrain ➢ Local climate and traditional building practices ➢ Seismic and hydrological risks ➢ Advocated for lightweight, flexible structures and low-impact construction materials to reduce stress on vulnerable slopes. |



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| Period | Employing organization and your title/ position. Contact in for references | Location | Summary of activities performed relevant to the Assignment |
|-----------|---|----------|---|
| 2017-2019 | <p>Organization: M/s Studio 13 Design Pvt Ltd</p> <p>Positions: Sr. Architect</p> | India | <ul style="list-style-type: none"> • working drawing, MEP drawing, Presentation Drawing, BOQ & Estimates, Rate Analysis, Site supervision, as Built drawings etc. • Prepare the designs, drawings, technical specifications / tender documents etc. accordingly. • Preparation of master plan • Preparation of detailed architectural and coordination with structural design and MEP design • Preparation of DPR • Preparation of preliminary, working and GFC drawings • Preparation of tender documents, BOQ and detailed specifications • Planning and designing of Furniture layout, smart class equipment, projectors etc. as per the requirement. • Review, alterations and modifications of designs & drawings during construction |
| 2011-2017 | <p>Organization: - Prabhat Kumar & associates</p> <p>Position: Architect</p> | India | <ul style="list-style-type: none"> • Preparation of preliminary, working and GFC drawings • Preparation of tender documents, BOQ and detailed specifications • Planning and designing of Furniture layout, smart class equipment, projectors etc. as per the requirement. • Prepare the designs, drawings, technical specifications / tender documents etc. accordingly. • Preparation of master plan • Preparation of detailed architectural and coordination with structural design and MEP design • Preparation of DPR • Review, alterations and modifications of designs & drawings during construction. |

Membership in Professional Associations and Publications: Nil

Language Skills (indicate only languages in which you can work):





| Languages | Speaking | Reading | Writing |
|-----------|----------|-----------|-----------|
| English | Fluent | Excellent | Excellent |
| Hindi | Fluent | Excellent | Excellent |

Adequacy for the Assignment:

| S. No | Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks |
|-------|--|
| 1. | <p>Name of assignment or project: Engaging Consulting Services for Preparation of Detailed Project Report for Preparation of Drainage Plan for Joshimath Town, Chamoli, Uttarakhand</p> <p>Year: Jan 2024 to May 2025</p> <p>Client: Uttarakhand Peyjal Sansdhan Vikas Evam Nirman Nigam</p> <p>Positions held: Sr. Architect</p> <p>Activities performed:</p> <ul style="list-style-type: none"> Provided expert input during the detailed survey of Joshimath Nagar, focusing on spatial mapping of vulnerable zones, unauthorized constructions, and infrastructure under environmental stress. Assessed urban form, density, and built-environment patterns contributing to land instability and drainage challenges. Proposed zoning modifications and relocation strategies for structures in high-risk areas, with architectural solutions that are contextually appropriate Contributed to the development of sustainable architectural design frameworks that account for: <ul style="list-style-type: none"> The fragile Himalayan terrain Local climate and traditional building practices Seismic and hydrological risks Advocated for lightweight, flexible structures and low-impact construction materials to reduce stress on vulnerable slopes. |
| 2. | <p>Name of assignment or project: Hiring of Architectural Services for the development of office, Guest Houses and Township of NHPC Regional Office Cum Residential Complex at Hollongi Airport Project Development Area, Kokola, under Balijan Circle, Papum Pare, Arunachal Pradesh.</p> <p>Year: 2024 to till date</p> <p>Client: NHPC Limited.</p> <p>Positions held: Sr. Architect</p> <p>Activities performed:</p> <ul style="list-style-type: none"> Led the site analysis and master planning for the integrated development of NHPC's regional office, guest houses, and township within the environmentally sensitive and hilly terrain of Hollongi. Ensured optimal land utilization, factoring in topography, drainage, accessibility, wind direction, and seismic considerations. Developed comprehensive architectural concepts for the office complex, residential blocks, and guest house facilities aligned with NHPC's operational needs and standards Incorporated local vernacular aesthetics, cultural context, and climatic responsiveness into the architectural language. Proposed climate-sensitive designs using passive strategies (solar orientation, natural ventilation, rainwater harvesting, etc.) suitable for high-rainfall and seismic-prone regions. |
| 3. | <p>Name of assignment or project: Hiring of architectural consultant for construction of Guest House and SCADA cum Auditorium at Subansiri lower HE Project, Gerukamukh</p> <p>Year: 2024 to till date</p> |





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| | <p>Client: NHPC Limited. Positions held: Sr. Architect Activities performed:</p> <ul style="list-style-type: none">• Led the conceptual and schematic design for a high-standard Guest House and SCADA (Supervisory Control and Data Acquisition) cum Auditorium facility, tailored to the operational and hospitality needs of one of India's largest hydroelectric projects.• Ensured that the architectural design harmonized functionality, aesthetic appeal, and contextual relevance to the terrain and cultural backdrop of Gerukamukh (Arunachal-Assam border region)• Collaborated with SCADA system engineers and NHPC project teams to design specialized architectural provisions for the control center and auditorium, including• Acoustic treatment for the auditorium• Vibration isolation and thermal control for SCADA rooms• Space zoning for technical equipment, operators, and guest interfaces |
| 4. | <p>Name of assignment or project: Architectural & Engineering Consultancy Service & Detailed Project Report for the Construction of Dedicated Corridor for Devotees to approach the Khatu Shyamji Temple including other Development work. Year: 2025 to Till Date Client: RSRDC Limited. Positions held: Sr. Architect Activities performed:</p> <ul style="list-style-type: none">• Led the conceptualization of a culturally and spiritually resonant architectural design for the corridor that aligns with the sanctity and heritage of the Khatu Shyamji Temple.• Developed a people-centric design focusing on crowd flow, visual coherence, symbolic elements, and pilgrim experience enhancement.• Undertook master planning of the corridor with designated zones for entry/exit, queuing, shaded pathways, emergency services, drinking water, seating, signage, and devotional amenities.• Integrated universal accessibility features, ensuring elderly- and differently-abled-friendly circulation throughout the corridor. |
| 5. | <p>Name of assignment or project: Selection Agency for an Architect cum Consultant (Including PMC) for the Ambaji to Saputara Tribal Tourist Circuit for Tourist Corporation of Gujarat Ltd. Year: 2024 to Till Date Client: Tourist Corporation of Gujarat Ltd. Positions held: Sr. Architect Activities performed:</p> <ul style="list-style-type: none">• Provided visionary architectural leadership in conceptualizing the Ambaji-Saputara Tribal Tourist Circuit, ensuring that the master plan honored the cultural richness, tribal heritage, and natural landscapes of Gujarat.• Designed tourism infrastructure with a region-specific architectural language, blending tribal motifs, vernacular building forms, and sustainable materials.• Tribal museums and cultural centers• Tourist way-side amenities• Viewing decks, eco lodges, and crafts bazaars• Public sanitation, rest zones, and interpretation centers• Ensured seamless spatial integration of transit, recreation, heritage, and ecological zones |
| 6. | <p>Name of assignment or project: Project Management Consultancy (PMC) for Providing Technical Assistance for Construction of Smart & Safe Footpaths in Berhampur City of Odisha.</p> |



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| | <p>Year: 2023 to till date Client: Sewerage Board (OWSSB) Positions held: Sr. Architect Activities performed:</p> <ul style="list-style-type: none"> • Prepare the designs, drawings, technical specifications / tender documents etc. accordingly. • Preparation of master plan • Preparation of detailed architectural and coordination with structural design and MEP design • Preparation of DPR • Preparation of preliminary, working and GFC drawings • Preparation of tender documents, BOQ and detailed specifications • Planning and designing of Furniture layout, smart class equipment, projectors etc. as per the requirement. • Review, alterations and modifications of designs & drawings during construction. |
| 7. | <p>Name of assignment/job or project: Project Management Consultancy (PMC) for Providing Technical Assistance for Construction of Smart & Safe Footpaths in Bhubaneshwar City of Odisha. Year: 2023 to Till Date Client: Sewerage Board (OWSSB) Positions held: Sr. Architect Activities performed:</p> <ul style="list-style-type: none"> • Preparation of concept, detailed design etc. • Coordination with the Client, Team Members. • Coordination and Discussion with the Client and other Government Authorities for approval of Concept, Feasibility and Detailed Project Reports. • Assess project risks and issues and provide solutions where applicable. • Project management. • Design Developments. |
| 8. | <p>Name of assignment/job or project: Project Management Consultant (PMC) for Assisting the Udaipur Smart City Ltd. to Design, Develop, Manage and Implementation of Smart City Project Under the Smart City Mission (SCM) Year: 2022 to 2024 Client: Udaipur Smart City Limited Positions held: Sr. Architect Activities performed:</p> <ul style="list-style-type: none"> • Prepare the designs, drawings, technical specifications / tender documents etc. accordingly. • Preparation of master plan • Preparation of detailed architectural and coordination with structural design and MEP design • Preparation of DPR • Preparation of preliminary, working and GFC drawings • Preparation of tender documents, BOQ and detailed specifications • Planning and designing of Furniture layout, smart class equipment, projectors etc. as per the requirement. • Review, alterations and modifications of designs & drawings during construction. |
| 9. | <p>Name of assignment/job or project: Proposed Multi-Level Car parking for Margao Municipal Council at Margao Goa on Chalta no. 54 (Part), 372, 482 (Part) of P.T. Sheet no. 238. Year: 2022 to Till Date Client: GOA State Urban Development Agency Positions held: Sr. Architect Activities performed:</p> |



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| | <ul style="list-style-type: none">• Coordination with the Client, Team Members.• Coordination and Discussion with the Client and other Government Authorities for approval of Concept, Feasibility and Detailed Project Reports.• Assess project risks and issues and provide solutions where applicable.• Project management.• Design Developments.• Preparation of Concept/Situational Analysis/Feasibility/Detailed reports, BOQs, detailed cost estimates and tender documents.• Coordination with the Client and other Government Authorities for approval of Concept, Feasibility and Detailed Project Reports.• Prepared report and presentation materials for meeting.• Meeting attended by different authorities.• Ensuring project deadlines are met.• Undertaking project tasks as required.• Ensuring projects adhere to frameworks and all documentation maintained appropriately for projects. |
| 10. | <p>Name of Project: Architectural & Engineering Consultancy Services for Construction of Eklavya Model Residential Schools (EMRS) in Northern Chhattisgarh for National Educational Society for Tribal Schools (NESTS), Ministry of Tribal Affairs, Govt. of India. Year: 2021 to Till Date Name of Client: WAPCOS Limited Position Held: Sr. Architect Responsibilities:</p> <ul style="list-style-type: none">• Coordination with the Client, Team Members.• Coordination and Discussion with the Client and other Government Authorities for approval of Concept, Feasibility and Detailed Project Reports.• Assess project risks and issues and provide solutions where applicable.• Project management.• Design Developments.• Preparation of Concept/Situational Analysis/Feasibility/Detailed reports, BOQs, detailed cost estimates and tender documents.• Coordination with the Client and other Government Authorities for approval of Concept, Feasibility and Detailed Project Reports.• Prepared report and presentation materials for meeting.• Meeting attended by different authorities.• Ensuring project deadlines are met.• Undertaking project tasks as required.• Ensuring projects adhere to frameworks and all documentation maintained appropriately for projects. |
| 11. | <p>Assignment Name: Appointment of Agency for review of DPR for MAHAMA Lot-1 Irrigation and Watershed Management Scheme under ETI Project (World Bank Funded) Client – WAPCOS Limited Position held: Sr. Architect Location: Rwanda, Africa Duration: 2019–2020 Responsibilities:</p> <ul style="list-style-type: none">• Review architectural designs and layout plans of:• Field office buildings, control rooms, pump houses, staff quarters• Community facilities (e.g., training centers, watershed information kiosks) |



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| | <ul style="list-style-type: none">• Storage structures (e.g., godowns, sheds, covered reservoirs)• Ensure functional design, spatial efficiency, and site suitability of all buildings proposed in the DPR.• Assess whether the proposed architectural solutions:• Are climatically responsive (e.g., proper ventilation, roofing types)• Use locally suitable materials and construction practices• Are compatible with the rural and environmental context of the project area• Recommend passive design strategies for energy efficiency and sustainability |
| 12. | <p>Assignment Name: Appointment of Agency for review of DPR for MAHAMA Lot-2 Irrigation and Watershed Management Scheme under ETI Project (World Bank-Funded)</p> <p>Client – WAPCOS Limited</p> <p>Position held: Sr. Architect</p> <p>Location: Rwanda, Africa</p> <p>Duration: 2019–2020</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Review architectural designs and layout plans of:• Field office buildings, control rooms, pump houses, staff quarters• Community facilities (e.g., training centers, watershed information kiosks)• Storage structures (e.g., godowns, sheds, covered reservoirs)• Ensure functional design, spatial efficiency, and site suitability of all buildings proposed in the DPR.• Assess whether the proposed architectural solutions:• Are climatically responsive (e.g., proper ventilation, roofing types)• Use locally suitable materials and construction practices• Are compatible with the rural and environmental context of the project area• Recommend passive design strategies for energy efficiency and sustainability |
| 13. | <p>Assignment Name: Providing Expert Services for Design and Supervision of various Smart City Projects under Smart City Mission- Aizawl</p> <p>Client – WAPCOS Limited</p> <p>Position held: Sr. Architect</p> <p>Location: Aizawl</p> <p>Duration: 2019–2020</p> <p>Responsibilities:</p> <ul style="list-style-type: none">• Lead the architectural design and site planning for Smart City components such as:• Public plazas, urban streetscapes, and pedestrian walkways• Smart buildings (e.g., command control centers, e-governance facilities)• Transport infrastructure (e.g., smart bus shelters, skywalks, multi-level parking)• Public amenities like e-toilets, information kiosks, vending zones• Ensure integrated urban design that aligns with the city's identity, cultural context, and topography.• Vet architectural drawings submitted by consultants or contractors for:• Functionality, circulation, space efficiency• Aesthetic quality and material selection• Compliance with codes (NBC 2016, local bylaws, accessibility norms)• Guide design refinement to enhance user experience and community engagement. |
| 14. | <p>Assignment Name: Providing Expert Services for Design and Supervision of various Smart City Projects under Smart City Mission (SCM-2) – Kohima</p> <p>Client – WAPCOS Limited</p> <p>Position held: Sr. Architect</p> <p>Location: KOHIMA</p> |





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| | <p>Duration: 2019 to 2020 Responsibilities:</p> <ul style="list-style-type: none">• Lead the conceptual and detailed design of various Smart City components, such as:• Smart roads, pedestrian zones, and urban plazas• Multi-level parking facilities• Smart bus terminals, public amenities (e-toilets, kiosks)• Community buildings, digital learning centers, smart libraries• Design must be tailored to Kohima's hill town morphology, space constraints, and climatic conditions.• Optimize site layout and building orientation based on slope, sun path, wind direction, and access.• Ensure built infrastructure is well-integrated with terrain, with minimal cutting/filling and safe slope treatment.• Plan for retaining structures, drainage, and landscape that supports hillside stability |
| 15. | <p>Project: TOURIST FACILITATION CENTER Period: 2017-2019 Client: Mathura Vrindavan Development Positions held: Sr. Architect Activities performed:</p> <ul style="list-style-type: none">• working drawing, MEP drawing, Presentation Drawing, BOQ & Estimates, Rate Analysis, Site supervision, as Built drawings etc.• Prepare the designs, drawings, technical specifications / tender documents etc. accordingly.• Preparation of master plan• Preparation of detailed architectural and coordination with structural design and MEP design• Preparation of DPR• Preparation of preliminary, working and GFC drawings• Preparation of tender documents, BOQ and detailed specifications• Planning and designing of Furniture layout, smart class equipment, projectors etc. as per the requirement.• Review, alterations and modifications of designs & drawings during construction |
| 16. | <p>Name of assignment/job or project: REHABILITATION CENTRE (HOSPITAL) in Sector-64 Gurgaon. Year: 2015-2017 Location: Gurgaon. Client: Various Departments Positions held: Sr. Architect Activities performed:</p> <ul style="list-style-type: none">• Prepare the designs, drawings, technical specifications / tender documents etc. accordingly.• Preparation of master plan• Preparation of detailed architectural and coordination with structural design and MEP design• Preparation of DPR• Preparation of preliminary, working and GFC drawings• Preparation of tender documents, BOQ and detailed specifications |
| 17. | <p>Name of assignment/job or project: MASTER PLANNING OF LAYOUT PLAN I.H.B.A.S., DILSHAD GARDEN, DELHI (Area- 111.69 Acres) Year: 2011 to 2015 Location: DILSHAD GARDEN Delhi Client: I.H.B.A.S., DILSHAD GARDEN, DELHI Positions held: Architect Activities performed:</p> |





- Preparation of preliminary, working and GFC drawings
- Preparation of tender documents, BOQ and detailed specifications
- Planning and designing of Furniture layout, smart class equipment, projectors etc. as per the requirement.
- Prepare the designs, drawings, technical specifications / tender documents etc. accordingly.
- Preparation of master plan
- Preparation of detailed architectural and coordination with structural design and MEP design
- Preparation of DPR
- Review, alterations and modifications of designs & drawings during construction.

Expert's contact information: nishantsaxena@Pureways.co.in phone: +91-9810683862

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of a Contract award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification, dismissal by the Client, and/or sanctions by the Bank.

Nishant Saxena

24.06.2025

Name of Expert

Signature

Date

Arvind Kumar Dheer-AGM Tender

24.06.2025

Name of Authorized Representative
of the Consultant

Signature

Date

Council of Architecture

Certificate of Registration

This is to certify that the name of

Mr. Nishant Savant

has been entered in the register and his Registration No. is
CM2019-78116.

Renewals

Valid Upto

Signature of
Registrar

31.12.2027

This certificate is valid from the twenty-seventh
day of September 2016 to the thirty-first
day of December 2017 inclusive.

List of Additional Qualifications:

Given under the common Seal of the Council of Architecture



this twenty-seventh day of September 2016

Olema
MCCARTHY




John H. Gutfreund
President

The Certificate of Registration is issued under sub-section (2) of Section 26 and sub-section(4) of Section 26 of the Architects Act, 1973, enacted by the Parliament of India.

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GREEN RATING FOR INTEGRATED HABITAT ASSESSMENT

Certificate of Participation

This is to certify that

Nishant Saxena

has participated in the 3-day training programme on

"**GRIHA V. 2015**"

conducted by GRIHA Council at

Jaipur

Secretary,
GRIHA Council

Date: 28th to 30th August, 2019

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M.A.T.C.H certificate

दर्शक संख्या / Degree Serial No.
MARCH/U/2019/63487

प्रमाणन संख्या : Enrollment No.
785MA/02/2016

अनुमांक संख्या : Roll No.
1670585504



Dr. A.P.J. Abdul Kalam प्राविधिक विश्वविद्यालय, उत्तर प्रदेश
(पूर्ववर्ती उत्तर प्रदेश प्राविधिक विश्वविद्यालय, लखनऊ)
विश्वविद्यालय की विद्या परिषद की अनुशंसा पर

निशांत सक्सेना
को मास्टर ऑफ आर्किटेक्चर उपाधि
प्रथम श्रेणी में

उनके द्वारा इस उपाधि के अवानि हेतु
विश्वविद्यालय द्वारा विहित अपेक्षाओं को सफलतापूर्वक पूछ करने पर
एकद्वितीय सन् 2019 में प्रदान की जाती है।

Dr. A. P. J. Abdul Kalam Technical University, Uttar Pradesh

(Formerly Uttar Pradesh Technical University, Lucknow)

Upon the recommendation of the Academic Council,

the University hereby confers the degree of

MASTER OF ARCHITECTURE

upon

NISHANT SAXENA

who has successfully completed the requirements prescribed by the University
for the award of this degree in

First Division

in the year 2019

क्रमांक (प.र.) ८७९
लेखन: १.८., भौतिक
सेवा/डाक: २१/०३/२०१९



निशांत सक्सेना
(नाम छाप)
निशांत
निशांत सक्सेना
लखनऊ



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B.Arch certificate

फॉर्म नंबर
Serial No. 16-2012410



पंजीकरण संख्या
Regn No. 1176360028
अनुमान संख्या
Roll No. 7700330

महर्षि दयानन्द विश्वविद्यालय रोहतक

(हरियाणा राज्य अधिनियम संख्या २१/१९७५ के अन्वर्गत स्थापित)
(एस एची. ए. प्रू. प्र-प्रत्याहित)

वास्तुकला स्नातक

प्रमाणित किया जाता है कि निशांत साक्षेना, सुपुत्र/सुपुत्री श्री प्रमोद कुनार, विद्यार्थी सत्
प्रिया स्कूल ऑफ आर्किटेक्चर एवं डिजाइन, रोहतक को इस विश्वविद्यालय द्वारा मई,
2016 में आयोजित तत्सम्बन्धी परीक्षा प्रथम श्रेणी में उत्तीर्ण कर लेने के उपरान्त
वास्तुकला स्नातक की उपाधि प्रदान की जाती है।

Maharshi Dayanand University, Rohtak

(Established under Haryana Act No. 25 of 1975)

("A" Grade, NAAC Accredited)

BACHELOR OF ARCHITECTURE

This is to certify that NISHANT SAXENA, son/daughter of Sh. PARMOD KUMAR, a student
of SAT PRIYA SCHOOL OF ARCHITECTURE & DESIGN, ROHTAK is hereby awarded the
degree of BACHELOR OF ARCHITECTURE on his/her having passed the examination
for the said degree held in MAY, 2016. He/She is placed in FIRST DIVISION.

प्रीवी नियंत्रक

Controller of Examination

रोहतक, हिमाचल प्रदेश १६२०३६
Received Date 17th May, 2016



विश्वविद्यालय के युक्तकन द्वारा प्रयोगित
Given under the seal of the University



कुलपति

Vice-Chancellor

कुलपति

Registrar



Diploma certificate

प्रयोग संख्या / Roll No. 300

3307

नमुक्ताना / Roll No. 284970

रामनौको शिक्षा परिषद् दिल्ली



राज्यपाल चयाप

BOARD OF TECHNICAL EDUCATION DELHI

पोस्ट-ट्रेड डिप्लोमा
POST-TRADE DIPLOMA

प्रमाणित किया जाता है कि **निखांत साक्षेना** ने इस परिषद् द्वारा
निर्धारित **टीन** वर्षीय प्रश्नपत्र के अनुसार शिक्षा पूर्ण करके जू..... **2011** को अंतिम परीक्षा
उत्तीर्ण की है अतः इन **आर्किटेक्चरल असिस्टेंटशिप** में पोस्ट-ट्रेड डिप्लोमा
प्रदान किया जाता है।

अधिकारी **प्रथम** निराकार चयाप-संस्था

*Certified that Nishant Saxena having completed
the three year course of studies prescribed by this Board, has passed the
requisite Examination in 2011 and is, therefore, awarded the Post/Trade
Diploma in Architectural Assistantship.*

Division **First** with Distinction.



N. Saxena

[Signature]
रजिस्ट्रर / Registrar
रामनौको शिक्षा परिषद् दिल्ली
Board of Technical Education DELHI

दिल्ली दिनांक 16 APR 2013
Delhi dated

[Signature]
अध्यक्ष / Chairman
रामनौको शिक्षा परिषद् दिल्ली
Board of Technical Education DELHI



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[Signature]

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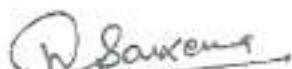


Date: 24th June, 2025

To,
M/s Pureways Infra Private Limited
FH-1, A Block, Vardhman Plaza,
Mangalam Place, Rohini Sector-3, New Delhi-110085

I, Nishant Saxena, the undersigned, confirm to provide my consent exclusive to M/s Pureways Infra Private Limited having its registered office at FH-1, A-Block, Vardhman Plaza, Mangafarm Place, Rohini Sector-3, New Delhi-110018 for proposing my CV as Key expert for the proposed project "Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs and Operational Assistance in Uttarakhand State under U-PREPARE Project" I also declare that I have not given my consent for the above-mentioned project to any organization/Firm.

I also confirm that my attached CV is true to the best of my knowledge and experience, and can be utilized for furnishing the proposal for the aforementioned project.



Signature (Full):

Name: Nishant Saxena
Contact Number: 9810683862



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FORM TECH-6; CURRICULUM VITAE (CV)

| | |
|---|--|
| Position Title and No. | K-6 Community Engagement/Social Development Specialist |
| Name of Expert: | Niraj Parashar |
| Date of Birth: | 16/09/1984 |
| Country of Citizenship/Residence | Indian |

EDUCATION :

| Qualification | Institution | Duration |
|---------------------------|--------------------------------|----------|
| Masters of Social Work | Banaras Hindu University | 2007 |
| B.A (Honors) in Sociology | Mahatma Gandhi Kashi Vidyapith | 2005 |

Employment record relevant to the assignment :

| Period | Employing organization and your title/position. Contact information for references | Country | Summary of activities performed relevant to the Assignment |
|-------------------|--|---------|---|
| 2019 to Till date | Organization: M/s Pureways Infra Pvt Ltd. Position: Social Development Specialist (Smart City) Reference: Tel.: 011 -47512342/44 | India | <ul style="list-style-type: none"> • Conduct detailed socio-economic surveys of the project area, including household-level data collection, community profiling, and stakeholder mapping. • Analyze data related to livelihoods, land use, agriculture, water access, public health, education, and vulnerable groups • Assess potential social and economic impacts of proposed drainage and water management interventions. • Identify risks related to land acquisition, displacement, livelihood disruption, and water-borne diseases • Design and implement stakeholder consultation plans in coordination with technical teams. • Prepare Resettlement Action Plans, livelihood restoration strategies, and community development frameworks, in line with national policies and international safeguards (e.g., World Bank, ADB). • Liaise with local authorities, NGOs, government departments, and water user associations. • Review relevant policies, acts, and socio-economic programs linked to water and land resources. • Prepare detailed socio-economic reports, impact assessment reports, and inputs to the Detailed Project Report (DPR). |
| 2016 to 2018 | Organization: M/s UNICEF Position: State Consultant | India | <ul style="list-style-type: none"> • Coordinate with state officials (SPO, SPD) of BEPC for ensuring capacity building of district point persons. • Assist BEPC in planning and monitoring the rollout of new guidelines for SMCs. • Develop success stories on SMCs that showcase |



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| Period | Employing organization and your title/position. Contact information for references | Country | Summary of activities performed relevant to the Assignment |
|------------------|--|---------|---|
| | | | <ul style="list-style-type: none"> the role of SMC in addressing school-specific constraints and problems. Provide assistance to BEPC for reviewing and updating mechanisms to track mainstreaming efforts for OOSC. |
| 2014 to 2016 | Organization: ADITHI, Muzaffarpur Position: Team Leader | India | <ul style="list-style-type: none"> Ensure theme specific conferences, meetings, seminars, and trainings. Identify & finalize resource agency for capacity building program domain wise. Writing program report for internal and external purposes & proposal conceptualization. Guided recruitment, induction & performance appraisal process of the entire team. Lead a team of 35 staff including program, admin, and finance & report to the executive secretary of the organization. Networking and relationship building with various partners, networks, alliances and government functionaries; Building advocacy on rights issues of the excluded and vulnerable communities. |
| 2012 to 2014 | Organization: Quest Alliance, Samatipur Position: Program Officer | India | <ul style="list-style-type: none"> Guide and facilitate school & community level student tracking, response & enrichment plan with the support of school teachers and the community champions. Coordination among different stakeholders for implementation and monitoring of planned activities. Facilitate training programs as a master trainer for different stake holders-Teacher, HM, community champion. Organize identification, tracking & management of focused child to test the effectiveness of early warning system. Conduct review with stakeholders and design process accordingly. Provide input to overall program as a member of thematic group. |
| Nov 2008 to 2012 | Organization: Sahbhagi Shikshan Kendra, Lucknow Position: Program Associate | India | <ul style="list-style-type: none"> Coordination and facilitation through field visits among 16 project offices of 14 partner NGOs of Agra, Mathura, Vrindavan, and Etawah of west U.P for better performance by partners and sustainability of YAP-II. Put inputs in partner's review meetings and in their action plan, report, activities. Support in the assessment of training needs of partners and organize capacity building program. Compilation and submission of daily, weekly, monthly, quarterly and annual report of the project. Liaison and networking with U.P. Jal Nigam, |





| Period | Employing organization and your title/position. Contact information for references | Country | Summary of activities performed relevant to the Assignment |
|--------|--|---------|--|
| | | | Municipal Corporation, pollution control board etc. |

Membership in Professional Associations and Publication : Nil

Language Skills (indicate only languages in which you can work):

| Languages | Speaking | Reading | Writing |
|-----------|----------|---------|---------|
| English | Good | Good | Good |
| Hindi | Good | Good | Good |

Adequacy for the Assignment:

| S.No | Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks |
|------|--|
| 1. | <p>Assignment Name: Engaging Consulting Services for Preparation of Detailed Project Report for Preparation of Drainage Plan for Joshimath Town, Chamoli, Uttarakhand Client: Uttarakhand Pehaj Sansadhan Vikas Evam Nirman Nigam Position held: Social Development Specialist Location: Uttarakhand Duration: Jan 2024 to May 2025 Responsibilities:</p> <ul style="list-style-type: none"> Conduct detailed socio-economic surveys of the project area, including household-level data collection, community profiling, and stakeholder mapping. Analyze data related to livelihoods, land use, agriculture, water access, public health, education, and vulnerable groups Review relevant policies, acts, and socio-economic programs linked to water and land resources. Prepare detailed socio-economic reports, impact assessment reports, and inputs to the Detailed Project Report (DPR). |
| 2. | <p>Assignment Name: Carrying out Balance Survey and Investigation Works including Engineering Services for Simsang Dam Project in Meghalaya Client: WAPCOS Limited Position held: Social Development Specialist Location: Meghalaya Duration: 2020 – 2023 Responsibilities:</p> <ul style="list-style-type: none"> Conduct detailed socio-economic surveys of the project area, including household-level data collection, community profiling, and stakeholder mapping. Analyze data related to livelihoods, land use, agriculture, water access, public health, education, and vulnerable groups Assess potential social and economic impacts of proposed drainage and water management interventions. Identify risks related to land acquisition, displacement, livelihood disruption, and water-borne diseases Design and implement stakeholder consultation plans in coordination with technical teams. Prepare Resettlement Action Plans, livelihood restoration strategies, and community development frameworks, in line with national policies and international safeguards (e.g., |





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| | <p>World Bank, ADB)</p> <ul style="list-style-type: none"> • Liaise with local authorities, NGOs, government departments, and water user associations. • Review relevant policies, acts, and socio-economic programs linked to water and land resources. • Prepare detailed socio-economic reports, impact assessment reports, and inputs to the Detailed Project Report (DPR). |
| 3. | <p>Assignment Name: Appointment of Agency for review of DPR for MAHAMA Lot-1 Irrigation and Watershed Management Scheme under ETI Project (World Bank Funded) Client – WAPCOS Limited</p> <p>Position held: Social Development Specialist Location: Rwanda, Africa Duration: 2019–2020 Responsibilities:</p> <ul style="list-style-type: none"> • Review the DPR to identify and assess: <ul style="list-style-type: none"> > Social impacts on communities in the command and catchment areas > Potential issues related to land acquisition, displacement, or loss of access to resources > Impacts on Scheduled Tribes, women-headed households, and other vulnerable groups > Verify that the DPR includes baseline socio-economic data and impact mitigation strategies. • Ensure the DPR incorporates or aligns with: <ul style="list-style-type: none"> > The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (LARR) > World Bank ESSS: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement • Review proposed entitlement frameworks, livelihood restoration measures, and housing support if displacement is anticipated using DEMs |
| 4. | <p>Assignment Name: Appointment of Agency for review of DPR for MAHAMA Lot-2 Irrigation and Watershed Management Scheme under ETI Project (World Bank Funded) Client – WAPCOS Limited</p> <p>Position held: Social Development Specialist Location: Rwanda, Africa Duration: 2019–2020 Responsibilities:</p> <ul style="list-style-type: none"> • Review the DPR to identify and assess: <ul style="list-style-type: none"> > Social impacts on communities in the command and catchment areas > Potential issues related to land acquisition, displacement, or loss of access to resources > Impacts on Scheduled Tribes, women-headed households, and other vulnerable groups > Verify that the DPR includes baseline socio-economic data and impact mitigation strategies. • Ensure the DPR incorporates or aligns with: <ul style="list-style-type: none"> > The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (LARR) > World Bank ESSS: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement • Review proposed entitlement frameworks, livelihood restoration measures, and housing support if displacement is anticipated using DEMs |
| 5. | <p>Assignment Name: Sarv Siksha Abhiyan for Bihar Education Project Council, Patna. Client: Bihar Education Council Position held: State Consultant Location: Bihar Duration: 2016 - 2018 Responsibilities:</p> <ul style="list-style-type: none"> • Coordinate with state officials (SPO, SPD) of BEPC for ensuring capacity building of district point persons. • Assist BEPC in planning and monitoring the rollout of new guidelines for SMCs. • Develop success stories on SMCs that showcase the role of SMC in addressing school-specific |





| | |
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| | <p>constraints and problems.</p> <ul style="list-style-type: none">Provide assistance to BEPC for reviewing and updating mechanisms to track mainstreaming efforts for OOSC. |
| 6. | <p>Assignment Name: Child-Centered Community Development Program Client: Plan International India Position held: Program Manager Location: Muzaffarpur Duration: 2014 - 2016 Responsibilities:</p> <ul style="list-style-type: none">Ensure theme specific conferences, meetings, seminars, and trainings.Identify & finalize resource agency for capacity building program domain wise.Writing program report for internal and external purposes & proposal conceptualization.Guided recruitment, induction & performance appraisal process of the entire team.Lead a team of 35 staff including program, admin, and finance & report to the executive secretary of the organization.Networking and relationship building with various partners, networks, alliances and government functionaries; Building advocacy on rights issues of the excluded and vulnerable communities. Building Projects, Rainwater Harvesting. Liaising with State & central pollution Department. |
| 7. | <p>Assignment Name: School Drop-out Prevention Pilot Program Client: USAID. Position held: Program Officer Location: Samastipur, Bihar Duration: 2012 - 2014 Responsibilities:</p> <ul style="list-style-type: none">Guide and facilitate school & community level student tracking, response & enrichment plan with the support of school teachers and the community champions.Coordination among different stakeholders for implementation and monitoring of planned activities.Facilitate training programs as a master trainer for different stakeholders-Teacher, HM, community champion.Organize identification, tracking & management of focused child to test the effectiveness of early warning system.Conduct review with stakeholders and design process accordingly.Provide input to overall program as a member of thematic group. |
| 8. | <p>Assignment Name: Reducing Vulnerability of Migrant Workers Client: Tata Trust Position held: Program Officer Location: Sitapur, Uttar Pradesh Duration: 2010 - 2012 Responsibilities:-</p> <ul style="list-style-type: none">Planning, coordination and organizing awareness activities such as mobile kiosks, right based campaign, meeting, workshop etc.Organize capacity building program for PRI members.Work as a resource person in capacity building program of partner NGOs on SHG, PRI etc.Compilation and submission of daily, weekly, monthly, quarterly and annual report of the project.Liaison and networking with banks/Govt. for linkage. |
| 9. | <p>Assignment Name: Yamuna Action Plan Client: JICA Position held: Program Associate Location: Agra, Uttar Pradesh</p> |





Duration: 2008 - 2010

Responsibilities:

- Coordination and facilitation through field visits among 16 project offices of 14 partner NGOs of Agra, Mathura, Vrindavan, and Etawah of west U.P for better performance by partners and sustainability of YAP-II.
- Put inputs in partner's review meetings and in their action plan, report, activities.
- Support in the assessment of training needs of partners and organize capacity building program.
- Compilation and submission of daily, weekly, monthly, quarterly and annual report of the project.
- Liaison and networking with U.P. Jal Nigam, Municipal Corporation, pollution control board etc.

Expert's contact information: (e-mail: tenders@pureways.co.in phone: 011-47512342/44)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of a Contract award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification, dismissal by the Client, and/or sanctions by the Bank.

Niraj Parashar

Name of Expert

Signature

24.06.2025

Date

Arvind Kumar Dheer-AGM Tender

24.06.2025

Name of authorized

Representative of the Consultant



Signature

Date

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महात्मा गांधी काशी विद्यापीठ



मास्टर ऑफ आर्ट्स

क्रमांक 11902

अनुक्रमांक 16130

विद्यालयांचे दस्तऐवजीकृत नंदा : महात्मा गांधी काशी विद्यापीठ अनुग्रहीत
महात्मा गांधी नंदा : तजली आ उदीतिनीतीय : गुरुदीनीश्वर नंदा :

प्रमाणित किंवा जाता है कि नीरोड परामर्श ने
महात्मा गांधी काशी विद्यापीठ की सन् २००७ की परीक्षा संप्राप्तकार्य विषय
लेकर प्राप्त श्रेणी में उत्तीर्ण की।

इनको प्रतिष्ठात्वात्प मास्टर ऑफ आर्ट्स की उपाधि प्रदान की गई।

Mahatma Gandhi Kashi Vidyapith Master of Arts

Roll No. 16130

This is to certify that Nived Panjwani
has passed the Master of Arts Examination of the
Mahatma Gandhi Kashi Vidyapith in the year 2007
in the subject Social Work and was placed in
First Division.

In recognition thereof he/she is being awarded the
degree of Master of Arts.

वाराणसी
Varanasi
दिनांक १० अगस्त २००७
Date



विचारक
Vice-Chancellor



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काशी हिन्दू विश्वविद्यालय

Banaras Hindu University

संस्थापित FOUNDED 1916



श्री नीरज पराशर इति-नामा

विश्वविद्यालयस्थाप्त २००५ तमे ईस्वीयवरें परीक्षायां द्वितीय श्रेण्यां समुत्तीर्य
बैचलर अँड आर्ट्स (आनर्स) इन्युपार्श्वं प्राप्तोदिति प्रमाणयति।

आनर्सविषय: - सोशियोलॉजी

प्रमाणित किया जाता है कि श्री नीरज पराशर
को इस विश्वविद्यालय की सत् २००५ ईस्वी की परीक्षा द्वितीय श्रेणी में उत्तीर्ण होने
एवं बैचलर अँड आर्ट्स (आनर्स) उपाधि प्रदान की गई।

आनर्स विषय: - सोशियोलॉजी

*This is to certify that Shri Niraj Parashar
obtained the degree of Bachelor of Arts (Hons.) in the examination of
2005 of this University and was placed in the Second Division.
Honours Subject - Sociology*

स्थान : वाराणसी
Place : Varanasi

दिनांक Dated : FEB, 06, 2006

कुमारपाल
Vice-Chancellor



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Date: 24th June, 2025

To,
M/s Pureways Infra Private Limited
FH-1, A Block, Vardhman Plaza,
Mangalam Place, Rohini Sector-3, New Delhi-110085

I, Niraj Prashar, the undersigned, confirm to provide my consent exclusive to M/s Pureways Infra Private Limited having its registered office at FH-1, A-Block, Vardhman Plaza, Mangalam Place, Rohini Sector-3, New Delhi-110018 for proposing my CV as Key expert for the proposed project "Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs and Operational Assistance in Uttarakhand State under U-PREPARE Project" I also declare that I have not given my consent for the above-mentioned project to any organization/Firm.

I also confirm that my attached CV is true to the best of my knowledge and experience, and can be utilized for furnishing the proposal for the aforementioned project.

Signature (Full): Niraj Prashar

Name: Niraj Prashar
Contact Number: 011 -47512342/44



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FORM TECH-6: CURRICULUM VITAE (CV)

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| Position Title and No. | K-7 – Environmental Management/Safeguard Specialist |
| Name of Expert: | Akhter Rasool Bhat |
| Date of Birth: | 10 th February 1976 |
| Country of Citizenship/Residence: | India |

Education:

| Qualification | Institution | Duration |
|---|--|----------|
| Master's Degree in (Aquatic) Environmental Sciences | Barkatullah University (formerly Bhopal University), Bhopal, India | 2004 |
| Bachelor's Degree in Ecology and Environment | MCN University, Bhopal, India | 2000 |
| Diploma in Computer Application | MHRD, NCPUL, N. Delhi | 2001 |

Employment record relevant to the assignment:

| Period | Employing organization and your title/position. Contact information for references | Country | Summary of activities performed relevant to the Assignment |
|-----------------------|--|---------|---|
| Jan 2025 to till date | <p>Organization: Pureways Infra Pvt Ltd.</p> <p>Position: Environmental Management Expert</p> <p>Reference: Tel: 011 4751 2342</p> | India | <ul style="list-style-type: none"> • Conducted preliminary and detailed environmental impact assessments of land subsidence, drainage congestion, and slope instability in and around Joshimath Nagar, a high-risk Himalayan town. • Identified environmental stressors contributing to terrain vulnerability, including unregulated construction, deforestation, altered hydrology, and past infrastructure practices. • Provided technical guidance on the development of a sustainable and resilient drainage plan, ensuring: <ul style="list-style-type: none"> • Proper diversion and channelization of surface runoff • Prevention of waterlogging and infiltration that could worsen ground instability • Integration of traditional drainage knowledge with modern engineering practices • Ensured that drainage works comply with environmental standards, minimizing disruption to natural watercourses and local ecosystems. |
| July 2018 to Dec 2024 | Organization: Eptisa Servicios de Ingenieria S.L. (World Bank Project) | India | <ul style="list-style-type: none"> • Preparation of Environmental Impact Assessment Study for Jhelum Flood Mitigation/management options. • Baseline Data Collection (17,000 Km² of catchment area of Jhelum River Basin). |



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| | <p>Position: Environmental Specialist (Independent Consultant)</p> <p>Reference: Project Incharge- Malladi Sivarama Prasad; David Sargent- Team Leader(Australia); Tel: +911-33-40347200 <u>E-mail:</u> mprasad@epsisa.com davidsargent@tng.com.au</p> | | <p>monitoring, Consultation, prelim environmental report, Feasibility study of Dogripora Spill Channel and Identified/proposed Dam/ Storage sites for flood mitigation, Dredging Estimate/ Dredging Plan/Sediment Disposal Plan etc.</p> <ul style="list-style-type: none"> • Development of generic Environmental Monitoring and Management Plans based on final structural and non-structural options etc. • Biological/ Ecological/ Physical components e.g. rivers, tributaries, lakes, wetlands (including Ramsar sites), floodplain areas, fisheries, aquatic biology, forests, rare or endangered species, and protected areas. • A hydrological and morphological regime that determines the ecology in the Jhelum River basin Integration of REFORM and APFM frameworks/ models as per International Best Practices with Jhelum Basin Study. |
| Dec 2017 to May 2018 | <p>Organization: GKW Consultant (DSC)</p> <p>Position: Team Lead- PCR: JKUSDIP & Environmental Consultant (Intermittent)</p> <p>Reference: Team Leader/ Coordinator, GKW Consult Tel: +919419015989- 9419007079 <u>Email:</u> kashgureeshit@gmail.com</p> | India | <ul style="list-style-type: none"> • Preparation, reviewing, and finalization of "Project Completion Reports of JKUSDIP- for onward submission to ADB. • Responsible for preparation of detailed "Semi-Annual Environmental Monitoring Reports- Project-2331,2925 & 3132)" for Client/ ADB. Devising monthly environmental monitoring programs for Water Supply Projects, Scientific Landfill site operation at Achan and conducting Wastewater/ water quality monitoring/ assessment/ evaluation of Cell-2 and Cell-3 – Influent, permeate, Reverse Osmosis (RO) based LTPs. • Evaluation and functioning of LTPs and Raw Leachate/ Cells/ Solid Waste generation in correlation with daily leachate treatment. • Preparation of Solid Waste Management- Sanitary Landfill Achan Monitoring reports. Environmental Monitoring of JKUSDIP sites. |
| Oct 2017- Nov 2017 | <p>Organization: &B (PWD) PIU-JTFRP</p> <p>Position: Environmental Specialist (Independent)</p> <p>Reference: Yadullah Shah Tel: +9170067703611</p> | India | <ul style="list-style-type: none"> • Provided services for preparation of Environmental & Social Screening report for "Construction of 120 Bed New IPD/OT Block at Existing Bone & Joint Hospital in Barzulla Srinagar, J&K". • Responsible for facilitating project approval by timely completion and submission of the Environmental/ Social Screening report for the World Bank. |





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| | Email: yoodshah@gmail.com; | | |
| Oct 2013- Sep 2017 | Organization: CDM Smith India Pvt. Ltd Position: Environmental Expert Reference: <i>VVK Satyasai Tata, Project Incharge- CDM Smith</i> <i>Tel: +918023543408</i> <i>Email: tatas@cdmsmith.com</i> | India | <ul style="list-style-type: none"> • Responsible for Preparation, Reviewing, and finalization of Environment Assessment Reports-IEE/ and comprehensive Environmental Management Plan and Environmental Monitoring Plans. Monitoring of different components of the project (Urban Transport- Flyovers, Grade Separators, Automatic Multi-Parking Facilities; • Solid Waste Management Projects- Construction of Sanitary Landfill Cell-1, Cell-2, Cell-3 & RO based LTP's, 17 Water Supply Schemes, Drainage projects,) and monitoring & assessment of 190 km Sewerage Network & 30 MGD MBBR STP. • Project Monitoring and preparation of Semi-annual Environmental Monitoring reports for ADB submission; Assisted PMU in establishing a system and training staff to monitor project environmental indicators and compliance of environmental mitigation plan of individual contracts; • Assisted PMU in implementation of environmental management plans; In charge of Environmental Monitoring Laboratories of J&K ERA. |
| Apr 2008 - Sep 2013 | Organization: SNC-Lavalin Infrastructure Pvt. Ltd Position: Environmental Expert Reference: <i>G H Bhat (Contract Specialist) / Ritu Kaushik (AVP- HR)</i> <i>Tel: +919419404419</i> <i>Email:</i> <i>ritu.kaushik@snc-lavalininfra.com</i> <i>ghulamhassanbhat@gmail.com</i> | India | <ul style="list-style-type: none"> • Responsible for the preparation, reviewing, and finalization of Environmental Assessment Reports-IEE, • Development of generic Environmental Management Plans for 52 subprojects separately (Kashmir, Leh, Kargil). • Appraisal Reports, Monthly Environmental Progress Reports, Quarterly Environmental Monitoring Reports (QEMR), Monthly Tracking Charts, Forest Strip Plans/clearance, Environmental Budgeting, Conducting Field Survey, baseline data generation, public consultation and training programs, critical analysis of environmental monitoring data, to ensure compliance of EMP implementation by contracting firms, scrutinizing of IPC bills for EC, preparing presentations for review meetings and environmental database management, environmental budgeting and |



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| | | | environmental enhancement plans, project performance evaluation reports, preparing presentations for environmental reviews. |
| Jan 2007 - Mar 2008 | <p>Organization: GRG Construction Company</p> <p>Position: Environment Officer</p> <p>Reference: Tareeq Ahmad (Director)/ Bilal Ahmad Tel: +919419001778 Email: grg_cc@rediffmail.com;</p> | India | <ul style="list-style-type: none"> Preparation of project report and liaison with regulatory authorities, and help in getting approval and clearance for the plants and to ensure plants are being established conforming all statutory requirements of CPCB/ SPCB for Hot Mix Macadam Plant, Stone Crusher Plant, Wet Mix Macadam Plant, Batching Plants and D.G sets |
| Dec 2006- Mar 2008 | <p>Organization: BU Bhopal/ Lakes & Waterways Development Authority, Srinagar</p> <p>Position: Research Scholar (Dal Lake)</p> <p>Reference: Maqbool Ahmed Wani Tel: +919419080510 Email:- maqboolwani@gmail.com;</p> | India | <ul style="list-style-type: none"> To evaluate potential lake areas requiring de-weeding/dredging to suggest time-period restrictions of de-weeding for Dal lake from phonological aspects, Evaluation of post-harvesting exodus activities into the ambient waters and its impacts on the overall lake system, to identify the critical plant length cut, to suggest the extent of annual macro phytic plant biomass removal from the lake, to suggest measures for shoreline development from the de-weeding point of view, Physico-chemical and biological analysis, research data generation. Associated with analysis and functioning of FAB sewerage treatment plants (STPs), algal bloom assessment (quantitative/ qualitative). |
| Apr 2006 - Oct 2006 | <p>Organization: Department of Hydrobiology, S.P College, J&K Govt</p> <p>Position: Project Member cum Research Associate</p> <p>Reference: K. Rafiq and Dr. Farooq Tel: +917006382221 Email: info@spcollege.co.in</p> | India | <ul style="list-style-type: none"> Responsible for conducting Pre and post- physical, chemical, and biological analysis, to assess the impact on local population, habitat disturbances, assess water quality deterioration, preparation of ecological monitoring, and environmental impact assessment report on (solid and liquid waste, waterborne diseases, development of efficient environmental protocol and mitigation strategy). The resultant Project Report, after a thorough review, the Shrine Board undertaking Amarnath pilgrimage made stringent rules for the preservation of sensitive ecology of Ladder Stream and Pahalgam. |





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| Apr 2005 - Nov 2006 | Organization: Higher Education. Dept. J&K Govt., S. P College, Srinagar Position: Lecturer- Env. & Water Management/ Env. Studies Reference: Prof Bashir Ahmad, Principal, S.P College, Tel: -01942476828 | India | <ul style="list-style-type: none"> As a College Lecturer was responsible for delivering daily Theoretical and Practical sessions and conducting industrial visits, ecological tours, in-situ, and ex-situ sampling (air, water, and soil), responsible for developing effective laboratory protocol and application of innovative techniques, GIS modeling, and remote sensing database virtual presentations, associated with different environmental projects and seminars. During the Year 2005, also appointed as coordinator for the centenary celebration of S.P College, Srinagar. |
| Aug 2004 - Mar 2005 | Organization: JK Students Environmental Forum (JKSEF) NGO Position: Coordinator Reference: Waqas Wadood (Chairman) Tel: +919419901879 Email: waqaswadood@gmail.com | India | <ul style="list-style-type: none"> Responsible for conducting a joint Environmental Awareness, capacity building, and environmental education to coordinate plantation drive at institutional levels, booklets, conducting seminars. Extensive travel to reach different stakeholders to address environmental issues in different regions of the State. |

Membership in Professional Associations and Publications: Indian Water Works Association (IWWA)- Life Member (Membership No: UM-7183

Language Skills (indicate only languages in which you can work):

| Languages | Speaking | Reading | Writing |
|-----------|----------|-----------|-----------|
| English | Fluent | Excellent | Excellent |
| Hindi | Fluent | Excellent | Excellent |

Adequacy for the Assignment:

| S. No | Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks |
|-------|---|
| 1. | <p>Project Name: Engaging Consulting Services for Preparation of Detailed Project Report for Preparation of Drainage Plan for Joshimath Town, Chamoli, Uttarakhand Year: Jan 2025 to May 2025 Client: Uttarakhand Peyjal Sanskrutik Vikas Evarn Nirman Nigam Location: Uttarakhand Position Held: Environmental Management Expert Activities Performed:</p> <ul style="list-style-type: none"> Conducted preliminary and detailed environmental impact assessments of land subsidence, drainage congestion, and slope instability in and around Joshimath Nagar, a high-risk Himalayan town. Identified environmental stressors contributing to terrain vulnerability, including unregulated |





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| | <ul style="list-style-type: none">construction, deforestation, altered hydrology, and past infrastructure practices.Provided technical guidance on the development of a sustainable and resilient drainage plan, ensuring:<ul style="list-style-type: none">Proper diversion and channelization of surface runoffPrevention of waterlogging and infiltration that could worsen ground instabilityIntegration of traditional drainage knowledge with modern engineering practicesEnsured that drainage works comply with environmental standards, minimizing disruption to natural watercourses and local ecosystems. |
| 2. | <p>Project Name: Consultancy Services for Preparing Feasibility and Detailed Project Report for Flood Mitigation and Comprehensive River Management Measures for Tawi River Basin, Kashmir, J&K India (The World Bank Project)</p> <p>Year: 2022 to 2024</p> <p>Client: Jhelum Tawi Flood Recovery Project (JTFRP)-PMU</p> <p>Location: Jammu</p> <p>Position Held: Environmental Management Expert</p> <p>Activities Performed:</p> <ul style="list-style-type: none">Tawi Basin Flood Mitigation/ Management- Feasibility Study of various flood management options and formulation DPR- to prepare reconnaissance environmental survey, environmental Screening assessment, and preparation of Environmental Impact Assessment (EIA) for Tawi River Flood Mitigation/ management options. Development of generic Environmental monitoring and Management Plans, based on final structural and non-structural options etc.,Developed a comprehensive Dredging Plan/ Dredging Sediment Disposal Management Plan (SDMP) for 9 Million CuM of Dredging Component of Tawi River Basin.Biological/Ecological/ Physical components e.g. rivers, tributaries, lakes, wetlands (including Ramsar sites) floodplain areas, fisheries, aquatic biology, forests, rare or endangered species, and protected areas. A hydrological and morphological regime that determines the ecology in the Tawi River basin. |
| 3. | <p>Project Name: Consultancy Services for the Preparation of DPR for Integrated Public Transport System (IPTS) in Srinagar City- Srinagar Smart City Ltd. Project, Srinagar J&K India</p> <p>Year: 2022 to 2022</p> <p>Client: Srinagar Smart City Ltd. (SSCL)</p> <p>Location: Srinagar, J&K</p> <p>Position Held: Environmental Specialist</p> <p>Activities Performed:</p> <ul style="list-style-type: none">Environmental assessment of proposed Inland Passenger Water Transport (IPWT) in Srinagar City for River Jhelum and Dal lake waterways, technical advice and assistance on restoration of the water transport system, to assist and advise the project team on environmental sustainability of the IPTS;preparation of Environmental/Ecological Assessment, Environment & Waste-Water Management Plan. |
| 4. | <p>Project Name: Consultancy Services for Preparing Feasibility and Detailed Project Report for Flood Mitigation and Comprehensive River Management Measures in Jhelum Basin, Kashmir J&K India (The World Bank Project)</p> <p>Year: 2018 to 2022</p> <p>Client: Jhelum Tawi Flood Recovery Project (JTFRP)</p> <p>Location: Kashmir Region</p> <p>Position Held: Environmental Specialist</p> <p>Activities Performed:</p> <ul style="list-style-type: none">To prepare Environmental Impact Assessment and Development of comprehensive Environmental Monitoring and Management Plans based on Structural and Non-Structural Options. Baseline Data Collection (17,000 Km² of catchment area), monitoring, Consultation, Jhelum River Basin environmental impact assessment study, prelim environmental report,Preparation of Environmental Impact Assessment Study for Jhelum Flood Mitigation/ management |



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| | <p>options. Feasibility study of Identified/proposed Dam/ Storage sites for flood mitigation. Development of generic Environmental monitoring and management Plans based on final structural and non-structural options etc. Biological/Ecological/ Physical components e.g. rivers, tributaries, lakes, wetlands (including Ramsar sites), floodplain areas, fisheries, aquatic biology, forests, rare or endangered species, and protected areas.</p> <ul style="list-style-type: none">• A hydrological and morphological regime that determines the ecology in the Jhelum River basin Integration of REFORM and APFM frameworks/ models as per International Best Practices with Jhelum Basin Study |
| 5. | <p>Project Name: Construction of Organic Manure Plant for Conversion of Harvested Weeds of Dal Lake into Organic Manure Plant at Gupt Ganga, Ishber, Srinagar City, J&K Lake Conservation Management Authority (JK LCMA), J&K India Year: 2022 to 2024 Client: CEF-NAFED for J&K Lake Conservation & Management Authority (JK LCMA) Govt. of J&K Location: Srinagar, J&K Position Held: Environmental Specialist-Principal Consultant Activities Performed:</p> <ul style="list-style-type: none">• Site survey/inventory, sampling/monitoring of the projects sites through approved laboratories of SPCB and SKUAST, prepared plan for compensatory plantation, to guide the CEF procure the required mandatory clearance/consent from the regulatory authorities,• preparation of Environmental & Social Screening, Detailed Environmental Impact Assessment Report and Development of Comprehensive Environmental Management Plan (EMP) for the "Construction of Organic Manure Plant & its Conversion of Harvested Weeds (>100,000 Metric Tons generated per annum) from Dal Lake into nutrient rich Organic Manure at Gupt Ganga, Ishber, Srinagar J&K |
| 6. | <p>Project Name: Preparation of Environmental Impact Assessment & Social Impact Assessment Reports (EIA/SIA) of 5 EPC Bridge Projects- (Separate Assignments), Kashmir J&K India The World Bank Project Year: May 2020 to 2022 Client: PWD (R&B) Location: Kashmir Region Position Held: Senior Environmental Consultant (Independent)- Activities Performed:</p> <ul style="list-style-type: none">• Preparation of Environmental & Social Impact Assessment (EIA/SIA-ESIA) Reports of Bridge Projects-• Site inventory and field assessment of 5 bridge projects in Wayif Ganderbal, Wachi Shopian, Sadoora Anantnag, Kaliban Sheerm Abad Baramulla, and Chimgund Kulgam.• Reconnaissance survey, evaluation of environmental/ social components, strip planning, assessment of environmental parameters. Public Involvement/ Consultation with stakeholders, compliance to World Bank Guidelines for the formulation/ preparation of EIA/ SIA/ EMPs/ SMPs. Preparation of Environmental and Social Impact Assessment (ESIA) reports and Environmental Management Plans / Social Management Plans-ESMP |
| 7. | <p>Project Name: Consultancy Services for Preparing of Feasibility and Detailed Project Report for Roads (188.5 km) in Jammu and Kashmir region, India. Project Cost: US \$ 4.6 Million/ INR 300 cr)- [The World Bank Project] Year: 2018 - 2022 Client: Jhelum Tawi Flood Recovery Project (JTFRP)-PMU Location: Kashmir, Jammu Position Held: Environmental Management Expert Activities Performed:</p> <ul style="list-style-type: none">• To prepare site inventory and feasibility reports of 19 road projects in Jammu and Kashmir (Environmental and Social Screening Reports). |





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| | <ul style="list-style-type: none"> • Reconnaissance survey, field visits, evaluation of environmental/ social components, strip planning, assessment of environmental parameters, drainage anomaly/ pattern in the project area, public Involvement/ Consultation with stakeholders, ESDS survey/ compliance to World Bank Guidelines for preparation of EIA reports, formulation of EMPS. • Preparation of Environmental Impact Assessment (EIA) and Environmental Management Plans for 19 project reports • To attend a review meeting with World Bank (WB) and represent the Environment Assessment reports for its approval by Client/ WB. |
| 8. | <p>Project Name: Consultancy Services for the Preparation of Detailed Project Report of Different Storm Water Drainage Projects in Srinagar – The World Bank Project Year: Dec 2019 to March 2020 Client: Jhelum Tawi Flood Recovery Project (JTFRP)-PMU Location: Srinagar, J&K India Position Held: Environmental Specialist (Independent) Activities Performed: Prepared [Environmental & Social Screening Reports-ESSR's], Environmental Impact Assessment (EA) Reports/ BOQ-Bid Document of 4 major Storm Water Drainage Schemes in Srinagar City having a total length of 70 km. Survey/ valuation of proposed sites, Public Involvement/ Consultation with stakeholders, ESDS survey/ compliance, to attend World Bank meetings and presentations.</p> |
| 9. | <p>Project Name: Design & Supervision Consultancy Services for Jammu and Kashmir Urban Sector Development Investment Program (JKUSDIP), Asian Development Bank (ADB) Project Year: December 2017- May 2018 Client: & K Economic Reconstruction Agency (JK ERA), Govt. of J&K Location: Jammu & Kashmir Position Held: PCR-Team Lead and Environmental Consultant Activities Performed: <ul style="list-style-type: none"> • Preparation of Semi-Annual Environmental Monitoring Reports for ADB, Evaluation of environmental assessment reports, environmental monitoring reports, evaluation and finalization of Solid Waste Management- Sanitary Landfill reports, monitoring and supervision of water supply, storm water drainage, urban transport sites, defining lab protocol for the scheduled monthly monitoring of environmental attributes which form part of SAEMR. </p> |
| 10. | <p>Project Name: Program Management Consultancy Services for Jammu & Kashmir Urban Sector Development Investment Program (JKUSDIP) financed under MFF by ADB Loan: IND- 2331, 2925 & 3132 (Project Cost: the US \$ 395 Million) Asian Development Bank (ADB) Project Year: October 2013 – September 2017 Client: & K Economic Reconstruction Agency (JK ERA), Govt. of J&K Location: Jammu & Kashmir Position Held: Environmental Expert and additional duty of In-charge of Environmental Monitoring Activities Performed: <ul style="list-style-type: none"> • Prepared Environmental Assessment/ IEE Reports, Appraisal Reports, Environmental Management & Monitoring Plans, Environmental Budgets, Semi-Annual Environmental Monitoring Reports (SAEMR), inputs for DPR and updating of Monthly Progress Report (MPR). • Quarterly Environmental Monitoring Report (QEMR), baseline data generation, conducting public consultation and incorporation in EA & SAEMR reports Collection of baseline data on environmental attributes; monitor the implementation as per the management plan; Assist PMU in establishing EMS system and training staff to monitor the Project's environmental indicators, and compliance of environmental management plan; • Review and check the quality of data, evaluate effectiveness with which the mitigation and monitoring measures are implemented, and recommended action to be taken; </p> |



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| | <ul style="list-style-type: none"> prepared periodic safeguard monitoring reports for ADB; supported PMU/PIUs in obtaining applicable statutory clearances; In-charge Environmental Monitoring Laboratory (EML) to conduct scheduled environmental monitoring (Air, Water, and Noise) of all packages in both Jammu and Srinagar, environmental monitoring database management, critical analysis of Air, Water, and Noise quality data, monthly report writing and Corrective Action Measures; Storm Water and Grey Water Management, under SWD projects Sanitary Landfill Site- Its performance evaluation and environmental monitoring, devising decisive project-specific Corrective Action Measures/ Recommendations, Leachate Treatment Plants (LTP's)- Its performance and evaluation based on critical analysis and research; Leachate/ Waste water management, Devising safety protocol/ inspection Checklist; Prepared presentations for the Client. |
| 11. | <p>Project Name: Design and Supervision Consultancy Services to "Multi-Sector Project for Infrastructure Rehabilitation In J&K" financed by ADB under Loan: IND-2151 (Transport Sector-Kashmir/ Ladakh-Leh/Kargil) [Loan Project Cost: US \$ 320 Million. - Asian Development Bank (ADB) Project Year: Apr 2008 to Sept 2013</p> <p>Client: J&K Economic Reconstruction Agency (J&K ERA) Location: Jammu & Kashmir, India Position Held: Environmental Expert</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Preparation and devising of Environmental Management and Monitoring Plans (EMMP), SAR, IEE, DPR, Monthly Environmental Progress Reports, Quarterly Environmental Monitoring Reports (QEMR), Project Completion Reports (PCR), Monthly Tracking Charts, Forest Strip Plans, Environmental Budgeting, Conducting Field Survey, baseline data generation, public consultation and training programs, critical analysis of environmental monitoring data, to ensure compliance of environmental Safeguards and EMP implementation, of Statutory Environmental Requirements from regulatory authorities, to ensure contracting firms adhere to environmental covenants as per environmental management plan, issuance and evaluation of environmental compliance and clearance certificates to each IPC bills, preparing presentations for review meetings and environmental database management, environmental budgeting and environmental enhancement plans, project performance evaluation reports, preparing presentations for environmental reviews. Environmental evaluation, assessment & efficiency of Rangil, Kralpora and Nishat Water Treatment Plants (WTP's) for PCR preparation under Urban Sector-Water Supply. Assessment of of Water Quality database and its correlation with the functioning of WTP's under ADB Loan -2151 IND. Developing capacity building measures among contracting firms and consultancy for protection/ enhancement of the environment and environmentally sound working practices. Being responsible for managing successfully a team of 120 members (which includes engineers, environmental safety officers, contractors, representatives) |
| 12. | <p>Project Name: Project Report Formulation and Installation of Plants (HMM, SCP, BP, WMM, DG Sets) Year: Jan 2007 to Mar 2008</p> <p>Client: GRG Construction Company Location: Srinagar & Kunzer (Baramulla) J&K India Position Held: Environmental Officer</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Project report preparation, approvals/ clearance, and liaison with regulatory authorities, and to ensure plants are being established conforming to all statutory requirements of CPCB/ SPCB - Hot Mix Macadam Plant 60-70 tph, Stone Crusher Plant +100 tph, Wet Mix Macadam Plant 120 tph, Batching Plant 40m³ tph, and D.G sets 320,120 & 82.5 kva |

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| | |
|-----|--|
| 13. | <p>Project Name: Impact of Mechanical DE weeding on biotic dynamics of temperate Lake Ecosystem - Dal Lake (Research Topic)</p> <p>Year: Dec 2006 to Mar 2008</p> <p>Client: LAWDA/ BU (Ph.D. Work)</p> <p>Location: Srinagar, J&K</p> <p>Position Held: Research Scholar</p> <p>Activities Performed:</p> <ul style="list-style-type: none">• Potential lake areas requiring de-weeding, to suggest time-period restrictions of de-weeding for Dal lake from phonological aspects, Evaluation of post-harvesting exodus additive activities into the ambient waters and its impacts on overall lake health, to identify the critical plant length cut, to suggest the extent of annual macro phytic plant biomass removal from the lake, to suggest measures for shoreline development from the de-weeding point of view, Physio-chemical and biological analysis, research data generation.• Associated with analysis and functioning of FAB sewerage treatment plants (STP's), algal bloom assessment (quantitative/ qualitative). |
| 14. | <p>Project Name: Impact of Yatra (Amarnath Pilgrimage) on Lidder Stream and Pahalgam, Kashmir, the project of Shrine Board, Governor's House, Chasmashahi, Srinagar under Hydrobiology Research Laboratory Srinagar J&K India.</p> <p>Year: Apr 2006 - Oct 2006</p> <p>Client: Amarnath Shrine Board, J&K Govt.</p> <p>Location: Pahalgam Kashmir, India</p> <p>Position Held: Project member cum Research Associate</p> <p>Activities Performed:</p> <ul style="list-style-type: none">• Pre and post-physical, chemical, and biological analysis, to assess the impact on local population, habitat disturbances, to assess water quality deterioration, preparation of ecological monitoring and short environmental impact assessment report on (solid and liquid waste, open defecation, waterborne diseases, development of efficient environmental protocol and mitigation strategy.• The resultant Project Report, after a thorough review, the Shrine Board undertaking Amarnath pilgrimage made stringent guidelines for the annual pilgrimage to safeguard the sensitive ecology of Lidder Stream and Pahalgam |
| 15. | <p>Project Name: Teaching Services as Lecturer, Environment and Water Management Department and UG for Environmental Studies.</p> <p>Year: 2005, 2006; J&K</p> <p>Employer:</p> <p>Client: Govt. Higher Education Department, S.P College, Srinagar</p> <p>Location: Srinagar, J&K</p> <p>Position Held: Lecturer</p> <p>Activities Performed:</p> <ul style="list-style-type: none">• Delivering daily Theoretical and practical sessions, industrial visits, ecological tours, in-situ and ex-situ sampling (air, water, noise, soil, benthic and periphytic forms, macro phytic study, etc.).• responsible for developing effective laboratory protocol and application of innovative techniques, GIS modelling, and remote sensing database virtual presentations, associated with different environmental projects and seminars. During the Year 2005, also appointed as coordinator by Principal Prof. Bashir Ahmad for the centenary celebration of S.P College, Srinagar. |
| 16. | <p>Project Name: Environmental Education and Capacity Building of different Institutions and mass awareness JKSEF, NGO</p> <p>Year: Aug 2004-Mar 2005</p> <p>Client: NGO-JKSEF</p> <p>Location: Srinagar, J&K</p> <p>Position Held: Coordinator</p> |



**Activities Performed:**

- Environmental Awareness, capacity building, and environmental education, to coordinate plantation drive at institutional levels, booklets, conducting seminars. Extensive travel to reach different stakeholders to address environmental issues in different regions of the State.

Expert's contact information: (e-mail: gkhter.bhat3@gmail.com; Phone: +91-7006543364;

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of a Contract award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification, dismissal by the Client, and/or sanctions by the Bank.

Akhter Rasool Bhat
Name of Expert

Signature

24.06.2025
Date

Arvind Kumar Dheer-AGM Tender
Name of Authorized
Representative of the Consultant



24.06.2025
Date

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The Ministry of Finance
Government of India
and
Asian Development Bank
award this certificate to



Akhter Rasool Bhat

for participating in workshop on
ADB Procurement Procedures for J&K Urban Projects and
other Government Agencies
held at Srinagar during 18-19 October, 2012

PUNEET AGARWAL
Director (ADB)
Department of Economic Affairs
Ministry of Finance
Government of India

HUN KIM
Country Director
India Resident Mission
Asian Development Bank



अनुमतीक - १३४३
Roll No.नामांकनांक - C. २९४८६
Enrolment No.

मास्टर ऑफ साइंस
Master of Science

आन्द्रज विश्वविद्यालय, गुलाम रश्ते - डॉक्टर राजेश का भट्ट — ने
मास्टर ऑफ साइंस की उपाधि हेतु लिखारित पाठ्यक्रम
का अध्ययन विवरित/पूर्ण/स्वाक्षरित कार्रा/घुर्हा के लिए
मेरे — विश्वविद्यालय न शिक्षण विभाग, भोपाल — ने
किया एवं मेरे अध्ययन विवाद संकाय के अंतर्गत अनुच्छेद प्रमाणित
की अपेक्षित परीक्षा मेरे सन् २००५ मेरे प्रमाण — थोड़ी मेरे उत्तीर्ण हुए/हुई।
अतः इस विश्वविद्यालय का इन्हें

मास्टर ऑफ साइंस की उपाधि प्रदान की गई।

Akhter Rasool Bhat
राजेश डॉक्टर राजेश का भट्ट
has

undergone studies in the prescribed course in the

Subject Bioactive (Env. Science)

Under the Faculty of Fisheries Sciences as a Regular/Ex-Student of
University Teaching Deptt., Bhopal and has
passed the examination for the degree of **MASTER OF SCIENCE**

held in the year 2005 in First Division.

Therefore he/she has been admitted to the degree of
MASTER OF SCIENCE of this University.

परीक्षा नियंत्रक
Exam Controller
Registrar
भीमा

मिशन (R.R.) भवन, भीमा
भोपाल (M.P.) भवा, Dated :
५ मार्च २०१२

कुलपति,
Vice-Chancellor.

FRONTSIDE OF CERTIFICATE

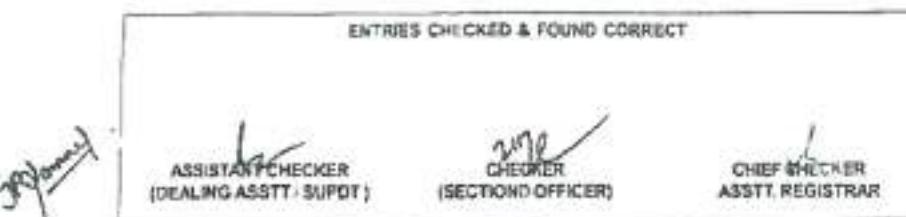


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The Govt. of M.P. Education Department vide M.P. Gazette Notification No. F-14/BSMC-3/3a dated 17th Nov 1982 has Changed the name of Bhopal University to Barkatullah Vishwavidyalaya, Bhopal



BACKSIDE OF CERTIFICATE (M.Sc)

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Barkatullah Vishwavidyalaya, Bhopal

(Formerly Bhopal University, Bhopal)

STATEMENT OF MARKS

No 0U1523



| Year of Examination | Roll No. | Enrolment No. | Category | Regulation |
|---|-------------------------------|------------------------|------------------|----------------|
| T.I. Exams | | | Examination | |
| July 2004 | 1523 | C/29486 | H/SC Agriculture | |
| Name | | Akhter Rasool Bhat | | |
| S/o, D/o, W/o | | Sh. Gulzar Rasool Bhat | | |
| Mother's Name | | Smt. Farzana Bhat | | |
| College / Centre | | U.T.D. Bhopal | | |
| Papers Offered | | Max. Marks | Min. Marks | Marks Obtained |
| Dissertation | | 100 | 36 | 88 |
| Viva-Voca | | 50 | 18 | 40 |
| Presentations | | 50 | 18 | 40 |
| - Total Marks in T.I. Exam | 300 | 93 | 168 | |
| Marks obtained in I. Exam | 500 | 180 | 248 | |
| Marks obtained in II. Exam | 500 | 180 | 321 | |
| Marks obtained in III. Exam | 500 | 180 | 345 | |
| Previous Marks | — | Out of | — | Grand Total |
| | — | — | — | 1700 612 1082 |
| Total Marks in Words | one thousand Eighty Two only. | | | |
| Result | Pass | Division | First | |
| Result of Additional Paper whose marks are not added in Total | Paper | marks | | |
| | — | Max. Min. | Marks Obtained | Result |

1. The asterisk adjacent to marks denotes Tenura (*).
 2. The alphabet 'C' adjacent to marks denotes carry forward.
 3. The alphabet 'U' indicates UFM & cancellation of the papers performance.

Office of the:

Barkatullah Vishwavidyalaya,
Bhopal Dated 11/8/2004

Walter

Ch. Chakar


 REGISTRAR
 Prof. M. S. Khan (M.A.)
 Barkatullah University, Bhopal


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BARKATULLAH VISHWAVIDYALAYA, BHOPAL
 (Formerly Bhopal University, Bhopal)

STATEMENT OF MARKS

No 000795

| Year of Examination | Roll No. | Enrolment No. | Examination | Category | Regular |
|---|-------------------------------|---------------|-----------------------------|----------------|---------|
| Jan 2004. | 466 | C-29VB6 | M.Sc. Environmental Science | | |
| Name | Akhter Rasool Bhat | | | | |
| S/o., D/o, W/o | Sh. Gulzar Rasool Bhat | | | | |
| Mother's Name | Bmt. Rashida Bhat | | | | |
| College / Centre | U.T.D. Bhopal. | | | | |
| Course/Discipline | Max. Marks | Min. Marks | Marks Obtained | | |
| Environmental Biotechnology | 100 | - | 74 | | |
| Environmental Toxicology | 100 | - | 56 | | |
| Environmental Microbiology | 100 | - | 76 | | |
| Normal Administration of Environment with Water | 100 | - | 99 | | |
| Total Theory | 400 | 144 | 265 | | |
| Practical | 100 | 36 | 80 | | |
| Previous Marks | - | Out of | Grand Total | 500 | 180 345 |
| Total Marks in Words | Three Hundred Forty Five only | | | | |
| Result Pass | Division I | | | | |
| Result of Additional Paper whose marks are not added in Total | Paper | Answers | Max. Min. | Marks Obtained | Result |

1. The asterisk adjacent to marks denotes failure (*)

2. The alphabet 'C' adjacent to marks denotes carry forward.

3. The alphabet 'U' indicates UFM & cancellation of the papers performance.

Office of the

Barkatullah Vishwavidyalaya,
Bhopal Dated 19/5/2004

Walter

J. P. Chakar

REGISTRAR
 Asstt. Registrar (Exam)
 Barkatullah University, Bhopal


1 259

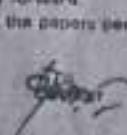
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Barkatullah Vishwavidyalaya, Bhopal
(Formerly Bhopal University, Bhopal)

STATEMENT OF MARKS

No. 006553

| II SEMESTER | | Category | Regulation | |
|--|----------------------|-------------------------------|-------------------------|----------------|
| Year of Examination | Roll No. | Enrolment No. | Examination | |
| Summer 2003 | 35189 | 130786 | M.Sc. Applied Geog. Sc. | |
| Name | Akhter Rasool Bhat | | | |
| S.I.C.O.W.O. | Oh Gulam Rasool Bhat | | | |
| Mother's Name | Ami Rasulda Bhat | | | |
| College/Centre | U.T.D. Bhopal | | | |
| Subjects Offered | | Max. Marks | Min. Marks | Marks Obtained |
| Groundwater Resources | | 100 | — | 56 |
| Computer Application | | 100 | — | 40 |
| Integrated Groundwater Management | | 100 | — | 74 |
| Water Pollution Control Technology | | 100 | — | 46 |
| Total Theory | | 400 | 144 | 846 |
| Practical | | 100 | 36 | 45 |
| Grand Total | | 500 | 180 | 321 |
| Total Marks in Words | | Three Hundred Twenty one only | | |
| Result | Pass | Division | | |
| Result of Additional Paper whose marks are not added in Total | | Paper | Marks | Marks Obtained |
| | | Max. — Min. | | |
| | | Result | | |
| 1. The asterisk adjacent to marks denotes failure (*). 2. The alphabet 'C' adjacent to marks denotes carry forward. 3. The alphabet 'U' indicates UTM & cancellation of the papers performance. Office of the: Barkatullah Vishwavidyalaya, Bhopal Dated 31/10/2003 | | | | |
|   REGISTRAR Amol Rakesh Chandra Barkatullah Vishwavidyalaya, Bhopal | | | | |



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बैचलर ऑफ इकोलॉजी एण्ड इन्यायरमेंट (बी.ई.ई.)

प्रमाणित किया जाता है कि

अवधारक समूह मेटर ने
इसी सन् 2000 में इस विश्वविद्यालय की
बैचलर ऑफ इकोलॉजी एण्ड इन्यायरमेंट
की परीक्षा द्वितीय अंतीम में प्राप्तीकी की।

उन्हें

बैचलर ऑफ इकोलॉजी एण्ड इन्यायरमेंट
की उपाधि प्रदान की जाती है।

BACHELOR OF ECOLOGY AND ENVIRONMENT (B.E.E)

This is to certify that

Akhter Rasool Bhat

having passed the

Bachelor of Ecology and Environment
Examination of this University in 2000 A.D.
in the Second Division
is admitted to the degree of
Bachelor of Ecology and Environment

गठनात्मक
Director General

Bhopal
/8-9-2002

FRONTSIDE OF CERTIFICATE



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संख्या 000023

Enrolment No.: F139901587

Name of Writer: H-S. Waghode

Signature of Writer:

Name of Checker 1: *P. S. Joshi* Name of Checker 2: *D.D. Chaitanya*

Signature of Checker 1:

Signature of Checker 2:

Assistant / Deputy Registrar (Exams)

Registrar (Exams)

Set up under the Madhya Pradesh Mahasamrat Chaturvedi Rashtriya Patrakarita Vishwavidyalaya
 Sansthan (Act.) No. 15/1990 of the Government of Madhya Pradesh

BACKSIDE OF CERTIFICATE (BACHELOR'S DEGREE)



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کوئٹہ کا، نیسل اسلام آباد-پاکستان
National Council for Promotion of Urdu Language

Cert No
0928

National Council for Promotion of Urdu Language
Ministry of Human Resource Development (Department of Secondary Education & Higher Education)
Government of India
West Block I, R K Puram, New Delhi - 110 082



DIPLOMA IN COMPUTER APPLICATIONS AND MULTILINGUAL D.T.P.

This is certified that **AKHTER RASOOL BHAT**
 Son of Shri **GULAM RASOOL BHAT**
 has successfully completed One Year Diploma In Computer Applications
 and Multilingual D.T.P. He appeared in the Annual Examination
 October 2001 from Computerised Calligraphy Training Centre at
SRINAGAR COMPUTER CENTRE
 Srinagar
 and was awarded **DISTINCTION**



TOPICS COVERED : Computer Fundamentals, Windows 95/98,
 Introduction to MS Office & MS Word, Pagemaker, CorelDraw, Photoshop,
 Urdu-Hindi / Regional Software, Power Point, MS Excel, MS Access,
 Internet & Email.

Dr. M. Hamidullah Bhat
 Director

Date : 19 DEC 2001

Ph. 6132928, 6103361, 6119857, Fax: 6138159, email: srujanan@rediffmail.com, website: www.unicouncil.com



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Date: 25th June, 2025

To,
M/s Pureways Infra Private Limited
FH-1, A Block, Vardhman Plaza,
Mangalam Place, Rohini Sector-3, New Delhi-110085

I, Akhter Rasool Bhat, the undersigned, confirm to provide my consent exclusive to M/s Pureways Infra Private Limited having its registered office at FH-1, A-Block, Vardhman Plaza, Mangalam Place, Rohini Sector-3, New Delhi-110018 for proposing my CV as Key expert- K7 (Environmental Management/Safeguard Expert) for the proposed project "Multipurpose Disaster Shelter Needs Assessment, Development plan, Shelter Designs and Operational Assistance in Uttarakhand State under U-PREPARE Project" I also declare that I have not given my consent for the above-mentioned project to any organization/Firm.

I also confirm that my attached CV is true to the best of my knowledge and experience, and can be utilized for furnishing the proposal for the aforementioned project.

Signature (Full):



Name: Akhter Rasool Bhat
Contact Number: 7008543384



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