RFP NO. 24/16-17/CGRDC/2016/RAIPUR, Dt.. 07-05-2016

REQUEST FOR PROPOSALS (RFP)

FOR

APPOINTMENT OF CONSULTANT FOR PREPARATION OF DETAILED PROJECT REPORT (DPR) AND PROJECT MANAGEMENT CONSULTANCY (PMC) FOR CONSTRUCTION OF ROAD / EXPRESSWAY WITH BRTS CORRIDOR ON EXISTING FAFADIH - TELIBANDHA - NAYA RAIPUR NARROW GAUGE RAILWAY TRACK

MANAGING DIRECTOR
CHHATTISGARH ROAD DEVELOPMENT CORPORATION LIMITED
(A GOVERNMENT OF CHHATTISGARH UNDERTAKING)

3rd Floor, Sirpur Bhawan Campus, Behind Akashwani, Civil Lines, Raipur (C.G.) 492001
Website : www.cgrdc.in, email ID : info@cgrdc.in, info.cgrdc@gmail.com, Ph- 0771 – 4043395,
Fax 0771-4033242

CIN : U45203CT2014SGC001560

Disclaimer

The information contained in this Request for Proposals document ("**RFP**") or subsequently provided to Applicants, whether verbally or in documentary or any other form by or on behalf of the Authority or any of its employees or advisers, is provided to Applicants on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

This RFP is not an agreement and is neither an offer nor invitation by the Authority to the prospective Applicants or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in the formulation of their Proposals pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the Authority in relation to the Consultancy. Such assumptions, assessments and statements do not purport to contain all the information that each Applicant may require. This RFP may not be appropriate for all persons, and it is not possible for the Authority, its employees or advisers to consider the objectives, technical expertise and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements and information contained in this RFP, may not be complete, accurate, adequate or correct. Each Applicant should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments and information contained in this RFP and obtain independent advice from appropriate sources.

Information provided in this RFP to the Applicants is on a wide range of matters, some of which depends upon interpretation of law. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Authority accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein.

The Authority, its employees and advisers make no representation or warranty and shall have no liability to any person including any Applicant under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, reliability or completeness of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way in this Selection Process.

The Authority also accepts no liability of any nature whether resulting from negligence or otherwise, howsoever caused, arising from reliance of any Applicant upon the statements contained in this RFP.

The Authority may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this RFP.

The issue of this RFP does not imply that the Authority is bound to select an Applicant or to appoint the Selected Applicant, as the case may be, for the Consultancy and the Authority reserves the right to reject all or any of the Proposals without assigning any reasons whatsoever.

The Applicant shall bear all its costs associated with or relating to the preparation and submission of its Proposal including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the Authority or any other costs incurred in connection with or relating to its Proposal. All such costs and expenses will remain with the Applicant and the Authority shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by an Applicant in preparation or submission of the Proposal, regardless of the conduct or outcome of the Selection Process.

Chhattisgarh Road Development Corporation Limited
3rd Floor, Sirpur Bhawan Campus,Behind Akashwani,Civil Lines, Raipur (C.G.) 492001
Website : www.cgrdc.in, email ID : info@cgrdc.in, Ph. No. 0771 – 4043395, Fax No. 0771-4033242
CIN : U45203CT2014SGC001560

REQUEST FOR PROPOSAL (RFP)

RFP No. 24/16-17/CGRDC/2016/ Raipur, Dated: 07/ 05/2016

Chhattisgarh Road Development Corporation Limited, Raipur has been assigned the work of Construction of Road /Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track.

Chhattisgarh Road Development Corporation Limited Raipur invites proposals from the interested Firms/Companies/organizations for providing consultancy for Preparation of DPR, including Project Management Consultancy for the above mentioned road. Interested Bidders should provide information, demonstrating that they have the required qualification and relevant experience to perform the services. Detailed information docket may be downloaded from official Departmental website **http://www.cgrdc.in** or may be obtained from the office of the undersigned during office hours. RFP along with the RFP Cost of Rs.10,000.00/- (Rs. Ten thousand only) in form of Non-refundable Demand Draft in favour of **Managing Director, Chhattisgarh Road Development Corporation, Limited** of any Nationalized/Scheduled bank, payable at Raipur, Chhattisgarh, must be delivered through Speed/ Registered (A.D.) post on the address below to reach on or before 28/05/2016 by 1500 Hrs. IST.

The following Schedule is to be followed for the assignment:

1.	Deadline for Purchasing RFP Document from office	26/05/2016
2.	Last date of Submission of Queries	16/05/2016
3	Pre Proposal meeting in CGRDC, HQ	16/05/2016, 1200 Hrs. IST
4	CGRDC's response to the Queries	18/05/2016
5	Deadline for submission of Proposals	28/05/2016, 1500 Hrs.IST
6	Opening of Technical proposals	28/05/2016, 1600 Hrs.IST
7	Short listing of Applicants	Up to 06/06/2016

Modifications/Amendments/Corrigendum, if any shall not be advertised in the news papers but, shall be published in the aforesaid web site only. The undersigned reserves the right to change the terms and conditions, select/reject any application without assigning any reason thereof.

Sd/-
Managing Director
Chhattisgarh Road Development Corporation Limited, Raipur (C.G.)

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Invitation for Proposals

1. INTRODUCTION

1.1 Background

- Chhattisgarh Road Development Corporation Limited (CGRDC), Raipur (the "Authority") is engaged in the development of roads in the state of Chhattisgarh and as part of this endeavour, the Authority has decided to undertake the construction of road along the abandoned Fafadih - Telibandha - Naya Raipur narrow gauge railway.. CGRDC has been mandated by the Government of Chhattisgarh for construction of Fafadih - Telibandha - Naya Raipur Road. In this regard, CGRDC is desirous to appoint a Consultant for "**Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track**" (the "**Project**").

Brief Particular of the project is given below:

Name of the Project	Length of the Project	Period of Assignment
Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track	22 km	Preparation of DPR : 02 Months PMC Works : 18 Months

Scope of Work:

Part 1: Preparation of Detailed Project Report for Construction of Road/Expressway with BRTS Corridor on existing Fafadih-Telibandha-Naya Raipur Narrow Gauge railway Track.

Part 2: Project Management Consultancy (PMC) for Supervision of Construction of Road/Expressway with BRTS Corridor on existing Fafadih-Telibandha-Naya Raipur Narrow Gauge railway Track.

Brief Scope of Work for Part 1:

The brief scope of services for DPR Preparation shall include but not be limited to the following:

(i) Fixing of alignment and its approval on existing Fafadih - Telibandha - Naya Raipur narrow gauge Railway Track.

(ii) Traffic surveys and demand assessment.

(iii) Engineering surveys and investigations.

(iv) Study, analysis, economics of different land pooling/procurement models for Highway Project, nodal development projects along the Highway & utility services along the Highway independently.

(v) The Consultant shall also carry out various options viz.

(a) Construction of an expressway

(b) Construction of Expressway with BRTS corridor etc.

(c) Construction of 4 lane road with BRTS corridor etc.

on existing Fafadih - Telibandha - Naya Raipur narrow gauge Railway Track.

(vi) The Consultant shall explore the options of providing accessibility to the proposed road from the adjacent private areas in the proximity of the proposed road alignment and also explore the option of charging development fee / surcharge from the users neighbouring areas that directly get benefited by the proposed road/ expressway.

(vii) Social Impact Assessment

(viii) Environment Impact Assessment

(ix) Preliminary designs of road, bridges, interchanges, VUPs, PUPs, ROBs, RUBs, structures, etc.

(x) Location and layout of connectors to tourist centres, important places, highways etc.

(xi) Preparation of Land acquisition report Plan Schedules and Utility Relocation Plans and Land Plan showing available Govt. land, its encroachment and list of encroachments with rehabilitation and resettlement plan.

(xii) Control regulations to ensure proper & efficient vehicular circulation and hence address potential traffic chaos.

(xiii) Estimation of Project Cost and assessment of Economic Viability, Risk & sensitivity analysis.

(xiv) Final recommendations on the project feasibility.

Brief Scope of Work for Part 2

The brief scope of services for Project Management Consultant shall include but not be limited to the following:

(i) review activities associated with design, design review during construction, required quality assurance and quality control of the project on behalf of CGRDC so as to ensure compliance of the requirements of the provisions of Concession Agreement
(ii) report to CGRDC on the Financial, Technical and physical progress of implementation aspects of the project,
(iii) assist CGRDC in arriving at an amicable settlement of disputes, if any

Detailed scope of work for Part-1 and Part-2 are described under the head "Terms of Reference" (TOR) in Schedule -1 of the Agreement

1.2 Request for Proposals

The Authority invites proposals (the "**Proposals**") for selection of a Consultant (the "**Consultant**") who shall undertake "Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track" in conformity with the TOR (collectively the "**Consultancy**").

The Authority intends to select the Consultant through an open competitive bidding process in accordance with the procedure set out herein.

1.3 Due diligence by Applicants

Applicants are encouraged to inform themselves fully about the assignment and the local conditions before submitting the Proposal by paying a visit to the Authority and the Project site, sending written queries to the Authority, and attending a Pre-Proposal Conference on the date and time specified in Clause 1.10.

1.4 Sale of RFP Document

1.4.1 RFP document can be obtained between 1100 hrs and 1600 hrs on all working days on payment of a fee of **INR 10,000.00 (INR Ten Thousand only)** in the form of a Demand Draft or Banker's Cheque drawn on any Scheduled Bank in India in favour of Managing Director, Chhattisgarh Road Development Corporation Limited, Raipur and payable at Raipur.

1.4.2 The document can also be downloaded from the Official Website of the Authority. In case of a downloaded RFP document, the Applicant will have to submit a Demand Draft or Banker's Cheque as mentioned in clause 1.4.1 at the time of submission of its Proposal.

1.5 Validity of the Proposal

The Proposal shall be valid for a period of not less than 120 days from the Proposal Due Date (the "**PDD**").

1.6 Brief description of the Selection Process

The Authority has adopted a two stage selection process (collectively the "**Selection Process**") for evaluating the Proposals comprising technical and financial proposals to be submitted in two separate sealed envelopes. In the first stage, a technical evaluation will be carried out as specified in Clause 3.1. Based on this technical evaluation, a list of short-listed applicants shall be prepared as specified in Clause 3.2. In the second stage, a financial evaluation will be carried out as specified in Clause 3.3. The first ranked Applicant shall be selected for negotiation (the "**Selected Applicant**") while the second ranked Applicant will be kept in reserve.

1.7 Currency conversion rate and payment

1.7.1 For the purposes of technical evaluation of Applicants, INR 60 (INR Sixty) per US$ shall be considered as the applicable currency conversion rate. In case of any other currency, the same shall first be converted to US$ as on the date 60 (sixty) days prior to the Proposal Due Date, and the amount so derived in US$ shall be converted into INR at the aforesaid rate. The conversion rate of such currencies shall be the daily representative exchange rates published by the International Monetary Fund for the relevant date.

1.7.2 All payments to the Consultant shall be made in INR in accordance with the provisions of this RFP. The Consultant may convert INR into any foreign currency as per Applicable Laws and the exchange risk, if any, shall be borne by the Consultant.

1.8 Schedule of Selection Process

The Authority would endeavour to adhere to the following schedule:

	Event Description	Date
1.	Last date for receiving queries/clarifications	16/05/2016
2.	Pre-Proposal Conference	16/05/2016
3.	Authority response to queries	18/05/2016
4.	Last date for purchase of RFP Document by the Applicant from office.	26/05/2016
5.	Proposal Due Date or PDD	28/05/2016 at 1500 Hrs.
6.	Opening of Technical Proposals	28/05/2016 at 1600 Hrs.
7.	Presentation on Technical Proposal	To be Declared
8.	Short listing of Applicants	Up to 06/06/2016
9.	Opening of Financial Bid	To be Declared

1.9 Pre-Proposal visit to the Site and inspection of data

The applicant is advised to visit and examine the site as deemed fit by the applicant and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and execution of the Contract. The cost of visiting the site and collecting relevant data shall be at the applicant's own expenses. It is condition of the RFP that the applicant has deemed to have visited the site and satisfied himself with all the conditions prevailing including any difficulties for executing the work under as per the terms of this RFP.

For any query related to pre-proposal site visit and inspection of data, the applicant will provide at least two days' notice to the nodal officer specified below:

Shri G.S. Solanki
General Manager, CGRDC
Phone: 0771-4263242
Mobile: 9425207316
Email: gm@cgrdc.in

1.10 Pre-Proposal Conference

The date, time and venue of Pre-Proposal Conference shall be:
Date: 16/05/2016
Time: 1200 Hrs. IST
Venue: Conference Hall, CGRDC Head Quarter, 3rd Floor, Sirpur Bhawan Campus, Behind Akashwani, Civil Lines, Raipur (C.G.)

1.11 Communications

1.11.1 All communications including the submission of Proposal should be addressed to:

Managing Director
3rd Floor, Sirpur Bhawan Campus, Behind Akashwani, Civil Lines, Raipur (C.G.)
Phone: 0771-4043395
Email: info@cgrdc.in, info.cgrdc@gmail.com

1.11.2 The **Official Website** of the Authority is:

http://www.cgrdc.in

1.11.3 All communications, including the envelopes, should contain the following information, to be marked at the top in bold letters:

RFP No. 24/16-17/CGRDC/2016/ Raipur, Dated 07/05/2016

2. INSTRUCTIONS TO APPLICANTS

A. GENERAL

2.1 Scope of Proposal

2.1.1 Detailed description of the objectives, scope of services, Deliverables and other requirements relating to this Consultancy are specified in this RFP. In case an applicant firm possesses the requisite experience and capabilities required for undertaking the Consultancy, it may participate in the Selection Process as a sole applicant in response to this invitation. The term applicant (the "**Applicant**") means the Sole Firm only. The manner in which the Proposal is required to be submitted, evaluated and accepted is explained in this RFP. **No Joint Venture (JV) or Consortium is allowed.**

2.1.2 Applicants are advised that the selection of Consultant shall be on the basis of an evaluation by the Authority through the Selection Process specified in this RFP. Applicants shall be deemed to have understood and agreed that no explanation or justification for any aspect of the Selection Process will be given and that the Authority's decisions are without any right of appeal whatsoever.

2.1.3 The Applicant shall submit its Proposal in the form and manner specified in this RFP. The Technical proposal shall be submitted in the form at Appendix-I and the Financial Proposal shall be submitted in the form at Appendix-II. Upon selection, the Applicant shall be required to enter into an agreement with the Authority in the form specified at Schedule-2.

2.1.4 **Key Personnel**

The Consultancy Team shall consist of the following key personnel (the "**Key Personnel**") who shall discharge their respective responsibilities as specified below:

For DPR Work:

SN	Designation of Key Personnel	Responsibilities
1	Team Leader Cum Senior Highway Engineer	He will lead, co-ordinate and supervise the multidisciplinary team for delivering the Consultancy in timely manner as envisaged in this RFP
2	Bridge/Structural Engineer	He will be responsible for suggesting options for provision of bridges and other structures and prepare their detailed analysis, design and drawings to be submitted as part of the DPR
3	Pavement Design / Traffic Engineer	He will be responsible for detailed design of the pavement / expressway / service road etc. including geometric design and pavement crust design, traffic demand forecast, safety provisions etc.
4	Senior Survey Engineer	He will be responsible for all type of survey works as envisaged in the scope of work and preparation of related reports and drawings.

5	Quantity Surveyor/Documentation Expert	He will be responsible for Quantity Surveying / Estimation and Preparation of Documents related to Bids and the other Project related documents.
6	Material Engineer cum Geotechnical Engineer / Expert	He will be responsible for Geo technical / Material Testing related to the Project.
7	Environmental and Social R & R Expert	He will be responsible for Environmental Impact Assessment and Social rehabilitation Assessment of the persons affected due to the Project, of the Project.
8	Land Assessment Expert	He will be responsible for obtaining the land related documents, confirmation of land ownership status from competent authority and preparation of land plan for the Project.

For PMC Work:

1.	Team Leader Cum Senior Highway Engineer	He will be responsible for reviewing the entire project preparation and implementation activities of the Contractor / Concessionaire
2.	Pavement Engineer	He will be responsible for the review of highway designs and drawings using sophisticated computer software and also construction and O&M works
3.	Senior Quality Cum Material Engineer	He will review the test results of bore holes, quarry and borrow area material to find out their strength characteristics and suitability for using
4.	Bridge/Structural Engineer	He will be responsible for checking the designs and supervision of bridges, ROBs, interchanges and any other structure to be constructed in the road projects
5.	Senior Quantity Surveyor	He will be responsible for taking all measures required to control the project cost and time over-runs
6.	Sr. Contract Specialist	He will be responsible for guiding and assisting Team Leader/Authority in all aspects of contract management in proper implementation of contract provisions
7.	CAD Expert	He will be responsible for all project related drawings preparation

2.1.5 Other Support Personnel:

The Key Personnel of the Consultancy Team shall be further assisted by suitable contingent of support personnel/s

2.2 Conditions of Eligibility of Applicants

2.2.1 Applicants must read carefully the minimum conditions of eligibility (the "**Conditions of Eligibility**") provided herein.

2.2.2 To be eligible for evaluation of its Proposal, the Applicant shall fulfil the following:

(A) **Technical Capacity**

(i) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments of providing consultancy services for **preparation of Detailed Project Report (DPR) / Feasibility Report** for 4-Laning of a National or State Highway having an aggregate length of minimum 66 km.

(ii) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments as stated above (i) at least one project of length not less than 22 km

(iii) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments of providing consultancy services as **PMC/Independent Engineer/Authority's Engineer** in 4-Laning of a National or State Highway having an aggregate length of minimum 66 km

(iv) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments as stated above (iii) at least one project of length not less than 22 km.

Note:

1. The experience of the projects from India only shall be considered,. Assignments from Private contractors/concessionaire shall not be considered.

2. Those projects which are substantially completed (90% of the contract value) shall also be considered for evaluation.

3. The Applicant has to submit the Completion Certificate issued by the Client or Statutory Auditor certificate certifying the fee received in respect of each Eligible assignment. No experience shall be considered without proof of experience by the Client / Statutory Auditor.

4. The weightage given for experience of an Applicant would depend on the role of the Applicant in the respective assignments. The Applicants experience would get full credit if it was the sole Applicant in the respective assignment. Experience weightage for Applicants joining lead partner/JV partner shall be considered in the same proportion as payment has been received by the Applicant towards consultancy work in the project

(B) **Financial Capacity**:

The Applicant shall have a minimum annual turnover of **INR 10.00 Crore** (INR Ten Crore) from Consultancy works in each year over last 3 (three) financial years preceding the Proposal Due Date. For the purpose of evaluation, Applicants having comparatively larger annual turnover shall be given added weightage.

Following enhancement factor will be used for the turnover from consultancy works during each of the 3 (three) financial years preceding the Proposal Due Date to a common base value for works completed in India:

Year of completion of services / turnover	Enhancement factor
Financial year in which RFP invited	1.00
One year prior to RFP	1.10
Two year prior to RFP	1.21
Three year prior to RFP	1.33

(C) **Availability of Key Personnel:** The Applicant should have had the "Team Leader Cum Senior Highway Engineer" for both DPR and PMC work on its role for more than 06 months as on the PDD. The Applicant shall offer and make available all Key Personnel meeting the requirements specified in the sub-clause (D) below.

(D) **Conditions of Eligibility for Key Personnel:** Each of the Key Personnel must fulfil the conditions of eligibility specified below:

For DPR Works

Key Personnel	Minimum Educational Qualification	Min. Professional Experience (Years)	Experience on Eligible Assignment
Team Leader Cum Senior Highway Engineer	Post Graduate in Highway Engineering / Transportation Engineering	20	Min. 15 years in Planning, project preparation and design of Highway projects, including 4/6 laning of NH/SH. Should have worked as a Team Leader for at least one project
Bridge/Structural Engineer	Post Graduate in Civil Engineering (Bridge or Structure Engineering)	15	Min. 10 years in project preparation and design of bridge projects.
Pavement Design / Traffic Engineer	Post Graduate in Civil Engineering (Highway Engineering / Transportation Engineering)	15	Minimum 10 years experience in pavement design and traffic studies
Senior Survey Engineer	Graduate or equivalent in Civil Engineering	10	Min. 5 years on project preparation and/or construction with thorough understanding of modern computer based methods of surveying
Quantity Surveyor/Documentation Expert	Graduate in Civil Engineering	10	Min. 5 years in Preparation of Bill of Quantities, Contract documents etc. for highway projects involving two/ four laning
Material Engineer cum Geotechnical Engineer / Expert	Graduate in Civil Engineering or M.Sc. Geology	10	Min. 5 years on road projects in design and/or construction

Environmental and Social R & R Expert	Graduate in Civil Engineering / Environment Engineering / Masters in Environment Science	10	Should have min. 5 years' experience in preparation of environment impact assessment
Land Assessment Expert	Graduate or equivalent	10	Should have minimum 5 years experience in handling land acquisition processes & similar activities

For PMC Works

Key Personnel	Min. Educational Qualification	Min. Professional Experience (Years)	Experience on Eligible Assignment
Team Leader Cum Senior Highway Engineer	Post Graduate Degree in Construction Management/Highway Engineering	20	At least 5 years experience as Team Leader/Resident Engineer/Project Manager or similar capacity in Highway project.
Pavement Engineer	Graduate in Civil Engineering	12	At least 8 years experience as Resident Engineer/Assistant Resident Engineer/Project Director/Project Manager/Superintending Engineer or equivalent/Executive Engineer or equivalent on similar construction work/Independent Engineering project
Senior Quality Cum Material Engineer	Graduate in Civil Engineering	15	At least 5 years Experience as Quality / Material Engineer in Construction/Construction Supervision of Highway Projects
Bridge/Structural Engineer	Graduate in Civil Engineering	15	10 years experience in Construction / Construction Supervision of bridge / interchange / any other structures.
Senior Quantity Surveyor	Graduate in Civil Engineering	15	At least 10 years experience as Quantity Surveyor in Highway project
Sr. Contract Specialist	Degree in Law/PG in management/certificate course in management/	15	Experience of at least 4 years as Contract Specialist on any National/State Highway project.
CAD Expert	Degree / Diploma in Civil Engineering	10	Should have at least 5 years experience in preparation of working drawings for Highway projects using Auto CAD

2.2.3 The Applicant shall enclose with its Proposal, certificate(s) from its Statutory Auditors stating its total revenues from professional fees during each of the 3 (three) financial years preceding the PDD and the fee received in respect of each of the Eligible Assignments specified in the Proposal. In the event that the Applicant does not have a statutory auditor, it shall provide the requisite certificate(s) from the firm of Chartered Accountants that ordinarily audits the annual accounts of the Applicant.

2.2.4 The Applicant should submit a Power of Attorney as per the format at Form-4 of Appendix-I; provided, however, that such Power of Attorney would not be required if the Application is signed by a partner or an Authorised Signatory of the Applicant, in case the Applicant is a partnership firm or limited liability partnership. A copy of company / board resolution giving signing authority to the Authorised Signatory should be submitted in such case.

2.2.5 Any entity which has been barred by the Central Government, any State Government, a statutory authority or a public sector undertaking, as the case may be, from participating in any project, and the bar subsists as on the date of Proposal, would not be eligible to submit a Proposal either by itself or through its Associate.

2.2.6 An Applicant or its Associate should have, during the last three years, neither failed to perform on any agreement, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Applicant or its Associate, nor been expelled from any project or agreement nor have had any agreement terminated for breach by such Applicant or its Associate.

2.2.7 While submitting a Proposal, the Applicant should attach clearly marked and referenced continuation sheets in the event that the space provided in the specified forms in the Appendices is insufficient. Alternatively, Applicants may format the specified forms making due provision for incorporation of the requested information.

2.3 Conflict of Interest

2.3.1 An Applicant shall not have a conflict of interest that may affect the Selection Process or the Consultancy (the "**Conflict of Interest**"). Any Applicant found to have a Conflict of Interest shall be disqualified. In the event of disqualification, the Authority shall forfeit and appropriate the Bid Security as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, *inter alia*, the time, cost and effort of the Authority including consideration of such Applicant's Proposal, without prejudice to any other right or remedy that may be available to the Authority hereunder or otherwise.

2.3.2 The Authority requires that the Consultant provides professional, objective, and impartial advice and at all times hold the Authority's interests paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The Consultant shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of the Authority. However, the said obligation shall not apply to services that are statutory audit in nature.

2.3.3 Some guiding principles for identifying and addressing Conflicts of Interest have been illustrated in the Guidance Note at Schedule-3. Without limiting the generality of the above, an Applicant shall be deemed to have a Conflict of Interest affecting the Selection Process, if:

(a) the Applicant and any other Applicant have common controlling shareholders or other ownership interest; provided that this disqualification shall not apply in cases where the direct or indirect shareholding or ownership interest of an Applicant (or any shareholder thereof having a shareholding of more than 5% (five per cent) of the paid up and subscribed share capital of such Applicant in the other Applicant, is less than 5 per cent of the subscribed and paid up equity share capital thereof; provided further that this disqualification shall not apply to any ownership by a bank, insurance company, pension fund or a public financial institution referred to in sub-section (72) of section 2 of the Companies Act, 2013. For the purposes of this Clause 2.3.3(a), indirect shareholding held through one or more intermediate persons shall be computed as follows:

(aa) where any intermediary is controlled by a person through management control or otherwise, the entire shareholding held by such controlled intermediary in any other person (the "**Subject Person**") shall be taken into account for computing the shareholding of such controlling person in the Subject Person; and

(bb) subject always to sub-clause (aa) above, where a person does not exercise control over an intermediary, which has shareholding in the Subject Person, the computation of indirect shareholding of such person in the Subject Person shall be undertaken on a proportionate basis; provided, however, that no such shareholding shall be reckoned under this sub-clause (bb) if the shareholding of such person in the intermediary is less than 26% (twenty six per cent) of the subscribed and paid up equity shareholding of such intermediary; or

(b) A constituent of such Applicant is also a constituent of another Applicant; or

(c) Such Applicant receives or has received any direct or indirect subsidy or grant from any other Applicant; or

(d) Such Applicant has the same legal representative for purposes of this Application as any other Applicant; or

(e) such Applicant has a relationship with another Applicant, directly or through common third parties, that puts them in a position to have access to each other's information about, or to influence the Application of either or each of the other Applicant; or

(f) a firm which has been engaged by CGRDC to provide goods or works or services for a project, and its associates, will be disqualified from providing consulting services for the same project save and except as provided in the clause 2.3.4; conversely, a firm hired provide consulting services for the preparation or implementation of the project, and its members or associates, will be disqualified from consequently providing goods or works, or services relating to the same project; or

(g) There is a conflict among this and other consulting assignments of the Applicant (including its personnel and Sub-consultant) and any subsidiaries or entities controlled by such Applicant or having common controlling shareholders. The duties of the Consultant will depend on the circumstances of each case. While providing consultancy services to the Authority for this particular assignment, the Consultant shall not take up any assignment that by its nature will result in conflict with the present assignment; or

(h) a firm which has been engaged by the Authority to provide goods or works or services for a project, will be disqualified from providing consulting services for the same project save and except as provided in Clause 2.3.4; conversely, a firm hired to provide consulting services for the preparation or implementation of a project will be disqualified from subsequently providing goods or works or services related to the same project; or

(i) the Applicant for the Project, its contractor(s) or sub-contractor(s) (or any constituent thereof) have common controlling shareholders or other ownership interest; provided that this disqualification shall not apply in cases where the direct or indirect shareholding or ownership interest of an Applicant (or any shareholder thereof having a shareholding of more than 5% (five per cent) of the paid up and subscribed share capital of such Applicant in the applicant or Concessionaire, if any, or its contractor(s) or sub-contractor(s) is less than 5% (five per cent) of the paid up and subscribed share capital of such Concessionaire or its contractor(s) or sub-contractor(s); provided further that this disqualification shall not apply to ownership by a bank, insurance company, pension fund or a Public Financial Institution referred to in sub-section (72) of section 2 of the Companies Act, 2013. For the purposes of this sub-clause (h), indirect shareholding shall be computed in accordance with the provisions of sub-clause (a) above.

2.3.4 An Applicant eventually appointed to provide Consultancy for this Project, shall be disqualified from subsequently providing goods or works or services related to the construction and operation of the same Project and any breach of this obligation shall be construed as Conflict of Interest; provided that the restriction herein shall not apply after a period of 5 (five) years from the completion of this assignment or to consulting assignments granted by banks/ lenders at any time; provided further that this restriction shall not apply to consultancy services performed for the Authority in continuation of this Consultancy or to any subsequent consultancy services performed for the Authority in accordance with the rules of the Authority. For the avoidance of doubt, an entity affiliated with the Consultant shall include a partner in the Consultant's firm or a person who holds more than 5% (five per cent) of the subscribed and paid up share capital of the Consultant, as the case may be.

2.4 Number of Proposals

No Applicant shall submit more than one Application for the Consultancy.

2.5 Cost of Proposal

The Applicants shall be responsible for all of the costs associated with the preparation of their Proposals and their participation in the Selection Process including subsequent negotiation, visits to the Authority, Project site etc. The Authority will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Selection Process.

2.6 Site visit and verification of information

Applicants are encouraged to submit their respective Proposals after visiting the Project site and ascertaining for themselves the site conditions, traffic, location, surroundings, climate, access to the site, availability of drawings and other data with the Authority, Applicable Laws and regulations or any other matter considered relevant by them.

2.7 Acknowledgement by Applicant

2.7.1 It shall be deemed that by submitting the Proposal, the Applicant has:

(a) made a complete and careful examination of the RFP;

(b) received all relevant information requested from the Authority;

(c) acknowledged and accepted the risk of inadequacy, error or mistake in the information provided in the RFP or furnished by or on behalf of the Authority or relating to any of the matters referred to in Clause 2.6 above;

(d) satisfied itself about all matters, things and information, including matters referred to in Clause 2.6 herein above, necessary and required for submitting an informed Application and performance of all of its obligations there under;

(e) Acknowledged that it does not have a Conflict of Interest; and

(f) agreed to be bound by the undertaking provided by it under and in terms hereof.

2.7.2 The Authority shall not be liable for any omission, mistake or error on the part of the Applicant in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to RFP or the Selection Process, including any error or mistake therein or in any information or data given by the Authority.

2.8 Right to reject any or all Proposals

2.8.1 Notwithstanding anything contained in this RFP, the Authority reserves the right to accept or reject any Proposal and to annul the Selection Process and reject all Proposals, at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons thereof.

2.8.2 Without prejudice to the generality of Clause 2.8.1, the Authority reserves the right to reject any Proposal if:

(a) at any time, a material misrepresentation is made or discovered, or

(b) the Applicant does not provide, within the time specified by the Authority, the supplemental information sought by the Authority for evaluation of the Proposal.

Misrepresentation/ improper response by the Applicant may lead to the disqualification of the Applicant. If such disqualification / rejection occurs after the Proposals have been opened and the highest ranking Applicant gets disqualified / rejected, then the Authority reserves the right to consider the next best Applicant, or take any other measure as may be deemed fit in the sole discretion of the Authority, including annulment of the Selection Process.

B. DOCUMENTS

2.9 Contents of the RFP

This RFP comprises the Disclaimer set forth herein above and the contents as per the Index.

Request for Proposal

1 Introduction
2 Instructions to Applicants
3 Criteria for Evaluation
4 Fraud and corrupt practices
5 Pre Contract Integrity Pact
6 Pre-Proposal Conference
7 Miscellaneous

Schedules

1 Terms of Reference
2 Form of Agreement
Annex-1: Terms of Reference
Annex-2: Deployment of Personnel
Annex-3: Estimate of Personnel Costs
Annex-4: Approved Sub-Consultant(s)
Annex-5: Cost of Services
Annex-6: Payment Schedule
Annex-7: Bank Guarantee for Performance Security
3 Guidance Note on Conflict of Interest

Appendices

Appendix-I: Technical Proposal
Form-1: Letter of Proposal
Form-2: Particulars of the Applicant
Form-3: Statement of Legal Capacity
Form-4: Power of Attorney
Form-5: Financial Capacity of Applicant
Form-6: Particulars of Key Personnel
Form-7: Proposed Methodology and Work Plan
Form-8: Abstract of Eligible Assignments of Applicant
Form-9: Abstract of Eligible Assignments of Key Personnel
Form-10: Eligible Assignments of Applicant
Form-11: Eligible Assignments of Key Personnel
Form-12: Curriculum Vitae (CV) of Key Personnel
Form-13: Deployment of Personnel
Form-14: Survey and Field Investigations
Form-15: Proposal for Sub-Consultant(s)

Appendix–II: Financial Proposal
Form-1: Covering Letter
Form-2: Total Consultancy Fee
Form-3: Financial Proposal for DPR Work
From-4 : Financial Proposal for PMC Work
Form-5: Breakdown of Local Currency Cost

2.10 Clarifications

2.10.1 Applicants requiring any clarification on the RFP may send their queries to the Authority in writing by speed post/ courier/ special messenger or by e-mail so as to reach before the date mentioned in the Schedule of Selection Process at Clause 1.8. The envelopes shall clearly bear the following identification:

"Queries concerning RFP for "Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track" (the "**Project**")."

The Authority shall endeavour to respond to the queries within the period specified therein but not late than 10 days prior to the PDD.

2.10.2 The Authority reserves the right not to respond to any questions or provide any clarifications, in its sole discretion, and nothing in this Clause 2.10 shall be construed as obliging the Authority to respond to any question or to provide any clarification.

2.11 Amendment of RFP

2.11.1 At any time prior to the deadline for submission of Proposal, the Authority may, for any reason, whether at its own initiative or in response to clarifications requested by an Applicant, modify the RFP document by the issuance of Addendum/ Amendment.

2.11.2 All such amendments will be posted on the Official Website and will be binding on all Applicants.

2.11.3 In order to afford the Applicants a reasonable time for taking an amendment into account, or for any other reason, the Authority may, in its sole discretion, extend the Proposal Due Date.

C. PREPARATION AND SUBMISSION OF PROPOSAL

2.12 Language

The Proposal with all accompanying documents (the "**Documents**") and all communications in relation to or concerning the Selection Process shall be in English language and strictly on the forms provided in this RFP. No supporting document or printed literature shall be submitted with the Proposal unless specifically asked for and in case any of these Documents is in another language, it must be accompanied by an accurate translation of the relevant passages in English, in which case, for all purposes of interpretation of the Proposal, the translation in English shall prevail. However, Applicants from countries that have signed the Hauge Legislation Convention 1961 need not get their documents legalized by Indian Embassy if it carries a confirming Appostille certificate

2.13 Format and signing of Proposal

2.13.1 The Applicant shall provide all the information sought under this RFP. The Authority would evaluate only those Proposals that are received in the specified forms and complete in all respects.

2.13.2 The Applicant shall prepare one original set of the Proposal (together with originals/ copies of Documents required to be submitted along therewith pursuant to this RFP) and clearly marked "ORIGINAL".

2.13.3 The Proposal shall be typed or written in indelible ink and signed by the authorised signatory of the Applicant who shall initial each page, in blue ink. In case of printed and published Documents, only the cover shall be initialled. All the alterations, omissions, additions, or any other amendments made to the Proposal shall be initialled by the person(s) signing the Proposal. The Proposals must be properly signed by the authorised representative (the "**Authorised Representative**") as detailed below:

(a) by the proprietor, in case of a proprietary firm; or

(b) by a partner, in case of a partnership firm and/or a limited liability partnership; or

(c) by a duly authorised person holding the Power of Attorney, in case of a Limited Company or a corporation; or

A copy of the Power of Attorney certified under the hands of a partner or director of the Applicant and notarised by a notary public in the form specified in Appendix-I (Form-4) shall accompany the Proposal.

2.13.4 Applicants should note the Proposal Due Date, as specified in Clause 1.8, for submission of Proposals. Except as specifically provided in this RFP, no supplementary material will be entertained by the Authority, and that evaluation will be carried out only on the basis of Documents received by the closing time of Proposal Due Date as specified in Clause 2.17.1. Applicants will ordinarily not be asked to provide additional material information or documents subsequent to the date of submission, and unsolicited material if submitted will be summarily rejected. For the avoidance of doubt, the Authority reserves the right to seek clarifications under and in accordance with the provisions of Clause 2.24.

2.14 Technical Proposal

2.14.1 Applicants shall submit the technical proposal in the formats at Appendix-I (the "**Technical Proposal**").

2.14.2 While submitting the Technical Proposal, the Applicant shall, in particular, ensure that:

(a) The Bid Security is provided;

(b) all forms are submitted in the prescribed formats and all pages of the RFP, corrigendum, addendums and Reply to Queries, submitted by the applicant shall be signed by the applicant or his representative holding the Power of Attorney (enclose original power of attorney);

(c) Power of Attorney, if applicable, is executed as per Applicable Laws;

(d) CVs of all Professional Personnel have been included;

(e) Key Personnel have been proposed only if they meet the Conditions of Eligibility laid down in clause 2.2.2 (D) the RFP;

(f) no alternative proposal for any Key Personnel is being made and only one CV for each position has been furnished;

(g) the CVs have been recently signed and dated in blue ink by the respective Personnel and countersigned by the authorised representative of the Applicant. Photocopy or unsigned / countersigned CVs shall be rejected;

(h) the CVs shall contain an undertaking from the respective Key Personnel about his/her availability for the duration specified in the RFP;

(i) Professional Personnel proposed have good working knowledge of English language;

(j) Key Personnel would be available for the period indicated in the TOR;

(k) no Key Personnel should have attained the age more than 60 (sixty) years at the time of submitting the proposal; and

(l) the proposal is responsive in terms of Clause 2.22.3.

2.14.3 Failure to comply with the requirements spelt out in this Clause 2.14 shall make the Proposal liable to be rejected.

2.14.4 If an individual Key Personnel makes a false averment regarding his qualification, experience or other particulars, or his commitment regarding availability for the Project is not fulfilled at any stage after signing of the Agreement, he shall be liable to be debarred for any future assignment of the Authority for a period of 5 (five) years. The award of this Consultancy to the Applicant may also be liable to cancellation in such an event.

2.14.5 The Technical Proposal shall not include any financial information relating to the Financial Proposal.

2.14.6 The proposed team shall be composed of experts and specialists (the "**Professional Personnel**") in their respective areas of expertise and managerial/support staff (the "**Support Personnel**") such that the Consultant should be able to complete the Consultancy within the specified time schedule. The Key Personnel specified in Clause 2.1.4 shall be included in the proposed team of Professional Personnel. Other competent and experienced Professional Personnel in the relevant areas of expertise must be added as required for successful completion of this Consultancy. The CV of each such Professional Personnel, if any, should also be submitted in the format at Form-12 of Appendix-I.

2.14.7 An Applicant may, if it considers necessary, propose suitable Sub-Consultants in specific areas of expertise. Credentials of such Sub-Consultants should be submitted in Form-15 of Appendix-I. A Sub-Consultant, however, shall not be a substitute for any Key Personnel.

2.14.8 The Authority reserves the right to verify all statements, information and documents, submitted by the Applicant in response to the RFP. Any such verification or the lack of such verification by the Authority to undertake such verification shall not relieve the Applicant of its obligations or liabilities hereunder nor will it affect any rights of the Authority there under.

2.14.9 In case it is found during the evaluation or at any time before signing of the Agreement or after its execution and during the period of subsistence thereof, that one or more of the eligibility conditions have not been met by the Applicant or the Applicant has made material misrepresentation or has given any materially incorrect or false information, the Applicant shall be disqualified forthwith if not yet appointed as the Consultant either by issue of the LOA or entering into of the Agreement, and if the Selected Applicant has already been issued the LOA or has entered into the Agreement, as the case may be, the

same shall, notwithstanding anything to the contrary contained therein or in this RFP, be liable to be terminated, by a communication in writing by the Authority without the Authority being liable in any manner whatsoever to the Applicant or Consultant, as the case may be.

In such an event, the Authority shall forfeit and appropriate the Bid Security as mutually agreed pre-estimated compensation and damages payable to the Authority for, *inter alia*, time, cost and effort of the Authority, without prejudice to any other right or remedy that may be available to the Authority.

2.15 Financial Proposal

2.15.1 Applicants shall submit the financial proposal in the formats at Appendix-II (the "**Financial Proposal**") clearly indicating the total cost of the Consultancy (Form-1 to 5 of Appendix-II) in both figures and words, in INR, and signed by the Applicant's Authorised Representative. In the event of any difference between figures and words, the amount indicated in words shall prevail. In the event of a difference between the arithmetic total and the total shown in the Financial Proposal, the lower of the two shall prevail.

2.15.2 While submitting the Financial Proposal, the Applicant shall ensure the following:

(i) All the costs associated with the assignment shall be included in the Financial Proposal. These shall normally cover remuneration for all the Personnel (Expatriate and Resident, in the field, office etc.), accommodation, air fare, equipment, printing of documents, surveys, geo-technical investigations etc. The total amount indicated in the Financial Proposal shall be without any condition attached or subject to any assumption, and shall be final and binding. In case any assumption or condition is indicated in the Financial Proposal, it shall be considered non-responsive and liable to be rejected.

(ii) The Financial Proposal shall take into account all expenses and tax liabilities. For the avoidance of doubt, it is clarified that all taxes shall be deemed to be included in the costs shown under different items of the Financial Proposal. Further, all payments shall be subject to deduction of taxes at source as per Applicable Laws.

(iv) Payment shall be made in INR in India only

(v) There is no provision of Mobilization advance or any advance in this contract

2.16 Submission of Proposal

2.16.1 The Applicants shall submit the Proposal in hard bound form with all pages numbered serially and by giving an index of submissions. Each page of the submission shall be initialled by the Authorised Representative of the Applicant as per the terms of the RFP. In case the proposal is submitted on the document downloaded from Official Website, the Applicant shall be responsible for its accuracy and correctness as per the version uploaded by the Authority and shall ensure that there are no changes caused in the content of the downloaded document. In case of any discrepancy between the downloaded or photocopied version of the RFP and the original RFP issued by the Authority, the latter shall prevail.

2.16.2 The Proposal will be sealed in an outer envelope which will bear the address of the Authority, RFP Notice number, Consultancy name as indicated at Clauses 1.11.1 and 1.11.3 and the name and address of the Applicant. It shall bear on top, the following:

"Do not open, except in presence of the Authorised Person of the Authority"

If the envelope is not sealed and marked as instructed above, the Authority assumes no responsibility for the misplacement or premature opening of the contents of the Proposal submitted and consequent losses, if any, suffered by the Applicant.

2.16.3 The aforesaid outer envelope will contain two separate sealed envelopes, one clearly marked **'Technical Proposal'** and the other clearly marked **'Financial Proposal'**. The envelope marked "Technical Proposal" shall contain:

(i) Application in the prescribed format (Form-1 of Appendix-I) along with Forms 2 to 15 of Appendix-I and supporting documents; and

(ii) Bid security as specified in Clause 2.20.1

The envelope marked "Financial Proposal" shall contain the Financial Proposal in the prescribed format (Forms 1 to 5 of Appendix-II).

2.16.4 The Technical Proposal and Financial Proposal shall be typed or written in indelible ink and signed by the Authorised Representative of the Applicant. All pages of the original Technical Proposal and Financial Proposal must be numbered and initialled by the person or persons signing the Proposal.

2.16.5 The completed Proposal must be delivered on or before the specified time on Proposal Due Date. Proposals submitted by fax, telex, telegram or e-mail shall not be entertained.

2.16.6 The Proposal shall be made in the Forms specified in this RFP. Any attachment to such Forms must be provided on separate sheets of paper and only information that is directly relevant should be provided. This may include photocopies of the relevant pages of printed documents. No separate documents like printed annual statements, company brochures, copy of contracts etc. will be entertained.

2.16.7 The Price quoted shall be firm throughout the period of performance of the assignment up to and including acceptance of the Detailed Project Report (DPR) by the Authority and discharge of all obligations of the Consultant for Project Management related works under the Agreement.

2.17 Proposal Due Date

2.17.1 Proposal should be submitted at or before 1500 hrs on the Proposal Due Date specified in Clause 1.8 at the address provided in Clause 1.11.1 in the manner and form as detailed in this RFP.

2.17.2 The Authority may, in its sole discretion, extend the Proposal Due Date by issuing an Addendum in accordance with Clause 2.11 uniformly for all Applicants.

2.18 Late Proposals

Proposals received by the Authority after the specified time on Proposal Due Date shall not be eligible for consideration and shall be summarily rejected.

2.19 Modification / Substitution / Withdrawal of Proposals

2.19.1 The Applicant may modify, substitute or withdraw its Proposal after submission, provided that written notice of the modification, substitution or withdrawal is received by the

Authority prior to Proposal Due Date. No Proposal shall be modified, substituted or withdrawn by the Applicant on or after the Proposal Due Date.

2.19.2 The modification, substitution or withdrawal notice shall be prepared, sealed, marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL", as appropriate

2.19.3 Any alteration / modification in the Proposal or additional information or material supplied subsequent to the Proposal Due Date, unless the same has been expressly sought for by the Authority, shall be disregarded.

2.20 Bid Security

2.20.1 The Applicant shall furnish as part of its Proposal, a bid security of **INR 1,00,000 (Indian Rupees One Lakh only)** in the form of Fixed Deposit Receipt (FDR) /Term Deposit Receipt (TDR) issued by one of the Nationalised/ Scheduled Banks in India in favour of **Managing Director, Chhattisgarh Road Development Corporation Limited, Raipur** and payable at **Raipur** (the **"Bid Security"**), returnable not later than 60 (thirty) days from PDD except in case of the two highest ranked Applicants as required in Clause 2.25.1. In the event that the first ranked Applicant commences the assignment as required in Clause 2.31, the second ranked Applicant, who has been kept in reserve, shall be returned its Bid Security forthwith, but in no case not later than 120 (one hundred and twenty) days from PDD. The Selected Applicant's Bid Security shall be returned, upon the Applicant signing the Agreement and completing the Deliverables assigned to it for the first 2 (two) months of the Consultancy in accordance with the provisions thereof.

2.20.2 Any Proposal not accompanied by the Bid Security shall be rejected by the Authority as non-responsive.

2.20.3 The Authority shall not be liable to pay any interest on the Bid Security and the same shall be interest free.

2.20.4 The Applicant, by submitting its Application pursuant to this RFP, shall be deemed to have acknowledged that without prejudice to the Authority's any other right or remedy hereunder or in law or otherwise, the Bid Security shall be forfeited and appropriated by the Authority as the mutually agreed pre-estimated compensation and damage payable to the Authority for, *inter alia*, the time, cost and effort of the Authority in regard to the RFP including the consideration and evaluation of the Proposal under the following conditions:

(a) If an Applicant submits a non-responsive Proposal;

(b) If an Applicant engages in any of the Prohibited Practices specified in Section 4 of this RFP;

(c) If an Applicant withdraws its Proposal during the period of its validity as specified in this RFP and as extended by the Applicant from time to time;

(d) In the case of the Selected Applicant, if the Applicant fails to reconfirm its commitments and obligations as mentioned in the RFP, during negotiations as required vide Clause 2.25.1;

(e) In the case of a Selected Applicant, if the Applicant fails to sign the Agreement or commence the assignment as specified in Clauses 2.29 and 2.31 respectively; or

(f) If the Applicant is found to have a Conflict of Interest as specified in Clause 2.3.

2.21 Performance Security

2.21.1 The selected Applicant shall submit a Performance Security (ies) to the Authority in the form of Bank Guarantee (The BG shall be in the format specified in Annex-7 of draft contract agreement and furnished from a Nationalized /Scheduled Bank approved by RBI, having a Net Worth of not less than Rs. 500 crore as per latest Annual Report of the Bank) /TDR/FDR on any Scheduled Bank in India in favour of Managing Director, Chhattisgarh Road Development Corporation Limited, Raipur and payable at Raipur as below:

5.00% (Five percent) of the Consultancy Fee for the DPR Preparation (as per the Appendix – II, Form 3), within 7 (Seven) days of date of issue of LOA, valid till 2 months from the date of completion of PMC services. and

5.00% (Five percent) of the Consultancy Fee of PMC works (as per Appendix II, Form-4), within 7 (Seven) days of date of issue of LOA for PMC Services, valid till 2 months from the date of completion of PMC services. If the period of services/contract agreement is increased, then the validity period of BG shall accordingly be extended.

The selected Applicant, by submitting its Application pursuant to this RFP, shall be deemed to have acknowledged that without prejudice to the Authority's any other right or remedy hereunder or in law or otherwise, its Performance Security shall be forfeited and appropriated by the Authority as the mutually agreed pre-estimated compensation and damages payable to the Authority for, *inter alia*, the time, cost and effort of the Authority in regard to the RFP, including the consideration and evaluation of the Proposal, under the following conditions:

(a) If an Applicant engages in any of the Prohibited Practices specified in Clause 4.1 of this RFP;

(b) if the Applicant is found to have a Conflict of Interest as specified in Clause 2.3; and

(c) If the Selected Applicant commits a breach of the Agreement.

D. EVALUATION PROCESS

2.22 Evaluation of Proposals

2.22.1 The Authority shall open the Proposals at 1600 hours on the Proposal Due Date, at the place specified in Clause 1.11.1 and in the presence of the Applicants who choose to attend. The envelopes marked "Technical Proposal" shall be opened first. The envelopes marked "Financial Proposal" shall be kept sealed for opening at a later date.

2.22.2 Proposals for which a notice of withdrawal has been submitted in accordance with Clause 2.19 shall not be opened.

2.22.3 Prior to evaluation of Proposals, the Authority will determine whether each Proposal is responsive to the requirements of the RFP. The Authority may, in its sole discretion, reject any Proposal that is not responsive hereunder. A Proposal shall be considered responsive only if:

(a) the Technical Proposal is received in the form specified at Appendix-I;

(b) it is received by the Proposal Due Date including any extension thereof pursuant to Clause 2.17;

(c) it is accompanied by the Bid Security as specified in Clause 2.20.1.

(d) it is signed, sealed, bound together in hard cover and marked as stipulated in Clauses 2.13 and 2.16;

(e) it is accompanied by the Power of Attorney as specified in Clause 2.2.4;

(f) it contains all the information (complete in all respects) as requested in the RFP;

(g) it does not contain any condition or qualification; and

(h) it is not non-responsive in terms hereof.

2.22.4 The Authority reserves the right to reject any Proposal which is non-responsive and no request for alteration, modification, substitution or withdrawal shall be entertained by the Authority in respect of such Proposals.

2.22.5 The Authority shall subsequently examine and evaluate Proposals in accordance with the Selection Process specified at Clause 1.6 and the criteria set out in Section 3 of this RFP.

2.22.6 After the technical evaluation, the Authority shall prepare a list of pre-qualified and shortlisted Applicants in terms of Clause 3.2 for opening of their Financial Proposals. A date, time and venue will be notified to all Applicants for announcing the result of evaluation and opening of Financial Proposals. Before opening of the Financial Proposals, the list of pre-qualified and shortlisted Applicants along with their Technical Score will be read out. The opening of Financial Proposals shall be done in presence of respective representatives of Applicants who choose to be present. The Authority will not entertain any query or clarification from Applicants who fail to qualify at any stage of the Selection Process. The financial evaluation of the Proposals shall be carried out in terms of Clauses 3.3.

2.22.7 Applicants are advised that Selection shall be entirely at the discretion of the Authority. Applicants shall be deemed to have understood and agreed that the Authority shall not be required to provide any explanation or justification in respect of any aspect of the Selection Process or Selection.

2.22.8 Any information contained in the Proposal shall not in any way be construed as binding on the Authority, its agents, successors or assigns, but shall be binding against the Applicant if the Consultancy is subsequently awarded to it.

2.23 Confidentiality

Information relating to the examination, clarification, evaluation, and recommendation for the selection of Applicants shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional adviser advising the Authority in relation to matters arising out of, or concerning the Selection Process. The Authority shall treat all information, submitted as part of the Proposal, in confidence and shall require all those who have access to such material to treat the same in confidence. The Authority may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/or the Authority or as may be required by law or in connection with any legal process.

2.24 Clarifications

2.24.1 To facilitate evaluation of Proposals, the Authority may, at its sole discretion, seek clarifications from any Applicant regarding its Proposal. Such clarification(s) shall be

provided within the time specified by the Authority for this purpose. Any request for clarification(s) and all clarification(s) in response thereto shall be in writing.

2.24.2 If an Applicant does not provide clarifications sought under Clause 2.24.1 above within the specified time, its Proposal shall be liable to be rejected. In case the Proposal is not rejected, the Authority may proceed to evaluate the Proposal by construing the particulars requiring clarification to the best of its understanding, and the Applicant shall be barred from subsequently questioning such interpretation of the Authority.

E. APPOINTMENT OF CONSULTANT

2.25 Negotiations

2.25.1 The Selected Applicant may, if necessary, be invited for negotiations. The negotiations shall generally not be for reducing the price of the Proposal, but will be for re-confirming the obligations of the Consultant under this RFP. Issues such as deployment of Key Personnel, understanding of the RFP, methodology and quality of the work plan shall be discussed during negotiations. A Key Personnel who did not score 75% (Seventy Five per cent) marks as required under Clause 3.1.2 shall be replaced by the Applicant with a better candidate to the satisfaction of the Authority. In case the Selected Applicant fails to reconfirm its commitment, the Authority reserves the right to designate the next ranked Applicant as the Selected Applicant and invite it for negotiations.

2.25.2 The Authority will examine the CVs of all other Professional Personnel and those not found suitable shall be replaced by the Applicant to the satisfaction of the Authority.

2.25.3 The Authority will examine the credentials of all Sub-Consultants proposed for this Consultancy and those not found suitable shall be replaced by the Applicant to the satisfaction of the Authority.

2.26 Substitution of Key Personnel

The Authority will not normally consider any request of the Selected Applicant for substitution of Key Personnel as the ranking of the Applicant is based on the evaluation of Key Personnel and any change therein may upset the ranking. Substitution will, however, be permitted if the Key Personnel is not available for reasons of any incapacity or due to health, subject to equally or better qualified and experienced personnel being provided to the satisfaction of the Authority. Replacement of key personnel during Consultancy Services having selected Consultants among other things, on the basis of an evaluation of proposed key professional staff, the Employer expects to negotiate, within the proposal validity period, a contract on the basis of the staff named in the proposal and, prior to contract negotiations, will require assurances that the staff will be actually available. The Employer will not consider substitutions during contract implementation except under exceptional circumstances up to maximum of 2 nos. of key personnel (considering equal weightage for each key personnel) and that too by only equally or better qualified and experienced personnel. During the course of providing services, substitution of key personnel may call for following deductions.

Key Personnel	Deduction for First Substitution of Key Personnel (In Rupess)
Team Leader Cum Senior Highway Engineer ,	2,00,000.00
Bridge/Structural Design Engineer, Pavement Design / Traffic Engineer.	1,00,000.00
Environmental and Social R & R Expert, Land Assessment Expert, Senior Survey Engineer, Material cum Geotechnical Engineer / Expert, Quantity Surveyor/Documentation Expert.	1,00,000.00

2.27 Indemnity

The Consultant shall, subject to the provisions of the Agreement, indemnify the Authority for an amount not exceeding 3 (three) times the value of the Agreement for any direct loss or damage that is caused due to any deficiency in services.

2.28 Award of Consultancy

After selection, a Letter of Award (the "LOA") shall be issued, in duplicate, by the Authority to the Selected Applicant and the Selected Applicant shall, within 7 (seven) days of the receipt of the LOA, sign and return the duplicate copy of the LOA in acknowledgement thereof. In the event the duplicate copy of the LOA duly signed by the Selected Applicant is not received by the stipulated date, the Authority may, unless it consents to extension of time for submission thereof, appropriate the Bid Security of such Applicant as mutually agreed genuine pre-estimated loss and damage suffered by the Authority on account of failure of the Selected Applicant to acknowledge the LOA, and the next highest ranking Applicant may be considered.

2.29 Execution of Agreement

After acknowledgement of the LOA as aforesaid by the Selected Applicant, it shall execute the Agreement within the period prescribed in Clause 1.8. The Selected Applicant shall not be entitled to seek any deviation in the Agreement

2.30 Consultant's Office

2.30.1 Consultant must have an office in Raipur for close co-ordination.

2.31 Commencement of assignment

The Consultant shall commence the Services at the Project site within 7 (seven) days of the date of the Agreement or such other date as may be mutually agreed. If the Consultant fails to either sign the Agreement as specified in Clause 2.29 or commence the assignment as specified herein, the Authority may invite the second ranked Applicant for negotiations. In such an event, the Bid Security of the first ranked Applicant shall be forfeited and appropriated in accordance with the provisions of Clause 2.20.4.

2.32 Proprietary data

Subject to the provisions of Clause 2.23, all documents and other information provided by the Authority or submitted by an Applicant to the Authority shall remain or become the property of the Authority. Applicants and the Consultant, as the case may be, are to treat all information as strictly confidential. The Authority will not return any Proposal or any information related thereto. All information collected, analysed, processed or in whatever manner provided by the Consultant to the Authority in relation to the Consultancy shall be the property of the Authority.

3. CRITERIA FOR EVALUATION

3.1 Evaluation of Technical Proposals

3.1.1 In the first stage, the Technical Proposal will be evaluated on the basis of Applicant's experience, its understanding of TOR, proposed methodology and Work Plan, and the experience of Key Personnel. Only those Applicants whose Technical Proposals get a score of 75 (Seventy Five) marks or more out of 100 (one hundred) shall qualify for further consideration.

3.1.2 Each Key Personnel must score a minimum of 75% (Seventy Five per cent) marks except as provided herein. A Proposal shall be rejected if the Team Leader scores less than 75% (Seventy Five per cent) marks or any two of the remaining Key Personnel score less than 75% (Seventy Five per cent) marks. In case the Selected Applicant has one Key Personnel, other than the Team Leader, who scores less than 75% marks, he would have to be replaced during negotiations, with a better candidate who, in the opinion of the Authority, would score 75% (Seventy Five per cent) or above.

3.1.3 The scoring criteria to be used for evaluation shall be as follows.

Item Code	Parameter	Maximum Marks	Criteria
A1.	Relevant Experience of the Applicant	25	Described below.
A2.	Proposed Methodology and Work Plan	05	Described below.
A3.	Relevant Experience of the Key Personnel	70	Described below.
Grand Total		**100**	

Breakup of marks for A1.

Item Code	Parameter	Maximum Marks	Criteria
A1.1.	Relevant Experience per clause 2.2.2 (A)	20	Described below.
A1.2.	Financial Capacity of the Consultant as per clause 2.2.2 (B)	5	Described below.
Grand Total		**25**	

Breakup of marks for A1.1.

Item Code	Parameter	Max. Marks	Criteria
A1.1.1.	(i) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments of providing consultancy services for	12	Sixty percent of the

	preparation of Detailed Project Report (DPR) / Feasibility Report for 4-Laning of a National or State Highway having an aggregate length of minimum 44 km. (ii) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments as stated above (i) at least one project of length not less than 22 km (iii) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments of providing consultancy services as **PMC/Independent Engineer / Authority's Engineer** in 4-Laning of a National or State Highway having an aggregate length of minimum 44 km (iv) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments as stated above (iii) at least one project of length not less than 22 km.		maximum marks
A1.1.2.	(i) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments of providing consultancy services for **preparation of Detailed Project Report (DPR) / Feasibility Report** for 4-Laning of a National or State Highway having an aggregate length of minimum 88 km. (ii) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments as stated above (i) at least two project of length not less than 22 km (iii) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments of providing consultancy services as PMC/Independent Engineer/Authority's Engineer in 4-Laning of a National or State Highway having an aggregate length of minimum 88 km	20	100% of Maximum marks

	(iv) The Applicant should have experience over the past 5 (five) years preceding the PDD in completed assignments as stated above (iii) at least two projects of length not less than 22 km		

Break up of marks for A1.2.

Item Code	Parameter	Maximum Marks	Criteria
A1.2.1.	Annual turnover of INR 10.00 (INR Ten) crore from Consultancy works in each year over last 3 (three) financial years preceding the Proposal Due Date	3	Sixty percent of the maximum marks
A1.2.2.	Annual turnover of INR 20.00 (INR Twenty) crore from Consultancy works in each year over last 3 (three) financial years preceding the Proposal Due Date	5	100% of Maximum marks.

Break up of marks for A2.

Item Code	Parameter	Maximum Marks
A2.1.	Comments & Suggestions on TOR	1
A2.2.	Quality of Approach and Methodology	3
A2.3.	Work Programme & Manning Schedule	1
Total		**5**

Break up of marks for A3.

Item Code	Key Personnel for DPR Work	Max. Marks	Key Personnel for PMC Work	Max. Marks
A3.1.	Team Leader Cum Highway Engineer	15	Team Leader Cum Senior Highway Engineer	15
A3.2	Bridge/Structural Engineer	10	Pavement Engineer	10
A3.3	Pavement Design / Traffic Engineer	10	Senior Quality Cum Material Engineer	10
A3.4	Senior Survey Engineer	10	Bridge/Structural Engineer	10
A3.5	Quantity Surveyor / Documentation Expert	10	Senior Quantity Surveyor	10

A3.6	Material Engineer cum Geotechnical Engineer / Expert	5	Sr. Contract Specialist	10
A3.7	Environmental and Social R & R Expert	5	CAD Expert	5
A3.8	Land Assessment Expert	5		
Total		**70**		**70**

Note:- Total 140 marks for staff positions of Technical Consultancy for DPR preparation and PMC Works shall be weighted to 70 marks, during technical evaluation.

The number of points assigned during the evaluation of qualification and competence of key staff are as given below:

S. No.	Description	Break up of Points (in %)	Max Points (in %)
1	General Qualification		35
	(i) Essential Educational Qualification	25	
	(ii) Desirable Educational; Qualification	10	
2	Relevant Experience and Adequacy for the Project		50
	(i) Total Professional experience	20 (max)	
	(ii) Experience in Similar Capacity	30 (max)	
3	Employment with the Firm		5
	Less than 1 year	0	
	1 year to 2 years	3	
	> 2 years	5	
4	Power Presentation by the Team before the Authority		10
Total			**100**

Note:- The assignment of marks for the proposals under sub criteria A1 between maximum marks and the 60% marks would be prorated.

3.2 Short-listing of Applicants

Of the Applicants, those Applicants scoring minimum 75 (Seventy five) or more marks shall be pre-qualified and short-listed for financial evaluation in the second stage.

3.3 Evaluation of Financial Proposal

3.3.1 The financial proposal of the shortlisted and pre-qualified applicants shall be evaluated on the basis of **"Least Cost to CGRDC."**

3.3.2 The Selected Applicant shall be the Applicant, who quotes least cost to CGRDC in his financial proposal. The second ranked Applicant shall be kept in reserve and may be invited for negotiations in case the first ranked Applicant is withdraws, or fails to comply with the requirements specified in clause 2.25, 2.29 and 2.31. It would be to the second ranked applicant to accept the offer.

4. FRAUD AND CORRUPT PRACTICES

4.1 The Applicants and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this RFP, the Authority shall reject a Proposal without being liable in any manner whatsoever to the Applicant, if it determines that the Applicant has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the "**Prohibited Practices**") in the Selection Process. In such an event, the Authority shall, without prejudice to its any other rights or remedies, forfeit and appropriate the Bid Security or Performance Security, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, *inter alia*, time, cost and effort of the Authority, in regard to the RFP, including consideration and evaluation of such Applicant's Proposal.

4.2 Without prejudice to the rights of the Authority under Clause 4.1 hereinabove and the rights and remedies which the Authority may have under the LOA or the Agreement, if an Applicant or Consultant, as the case may be, is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the issue of the LOA or the execution of the Agreement, such Applicant or Consultant shall not be eligible to participate in any tender or RFP issued by the Authority during a period of 2 (two) years from the date such Applicant or Consultant, as the case may be, is found by the Authority to have directly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.

4. 3 For the purposes of this Section, the following terms shall have the meaning hereinafter respectively assigned to them:

(a) "**corrupt practice**" means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the Authority who is or has been associated in any manner, directly or indirectly with the Selection Process or the LOA or has dealt with matters concerning the Agreement or arising therefrom, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Authority, shall be deemed to constitute influencing the actions of a person connected with the Selection Process); or (ii) save as provided herein, engaging in any manner whatsoever, whether during the Selection Process or after the issue of the LOA or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the LOA or the Agreement, who at any time has been or is a legal, financial or technical consultant/ adviser of the Authority in relation to any matter concerning the Project;

(b) "**fraudulent practice**" means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;

(c) "**coercive practice**" means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person's participation or action in the Selection Process;

(d) "**undesirable practice**" means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or (ii) having a Conflict of Interest; and

(e) "**restrictive practice**" means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair competition in the Selection Process.

5. PRE CONTRACT INTEGRITY PACT

GENERAL

This Pre-Proposal Pre-Contract Agreement (hereinafter called the Integrity Pact) is made on _____ day of the month of _____ 2016, between on one hand, the Chhattisgarh Road Development Corporation Limited (CGRDC) acting through Managing Director, CGRDC (hereinafter called the " AUTHORITY", which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Part and "…….. Entered by "……..." (Hereinafter called the "CONSULTANT", which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the second part.

WHEREAS the AUTHORITY proposes to procure Consultancy Services for "Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track" and the CONSULTANT is willing to offer/has offered the services and WHEREAS the CONSULTANT is a private company/public company/Government undertaking/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the AUTHORITY is Chhattisgarh Road Development Corporation Ltd.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to :-

Enabling the AUTHORITY to obtain the desired services at a competitive price in conformity with the defined specification by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling CONSULTANTs to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the AUTHORITY will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

COMMITMENTS OF THE AUTHORITY

1.1 The AUTHORITY undertakes that no official of the AUTHORITY, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the CONSULTANT, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, evaluation of Proposal, contracting or implementation process related to the contract.

1.2 The AUTHORITY will, during the pre-contract stage, treat all the CONSULTANTs alike, and will provide to all CONSULTANTs the same information and will not provide any such information to any particular CONSULTANT which could afford an advantage to that particular CONSULTANT in comparison to other CONSULTANTs.

1.3 All the officials of the AUTHORITY will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case any such preceding misconduct on the part of such official(s) is reported by the CONSULTANT to the AUTHORITY with full and verifiable facts and the same is prima facie found to be correct by the AUTHORITY, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the AUTHORITY and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the AUTHORITY the proceedings under the contract would not be stalled.

COMMITMENTS OF THE CONSULTANTS

3. The CONSULTANT commits itself to take all the measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its proposal or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-

3.1 The CONSULTANT will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favor or any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the AUTHORITY, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

3.2 The CONSULTANT further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the AUTHORITY or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Government.

3.3 The CONSULTANT shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this proposal/contract.

3.4 The CONSULTANT further confirms and declares to the AUTHORITY that the CONSULTANT has not engaged any individual or firm or company whether

Indian or foreign to intercede, facilitate or in any way to recommend to the AUTHORITY or any of its functionaries, whether officially or unofficially to the award of the contract to the CONSULTANT, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

3.5 The CONSULTANT, either while presenting the proposal or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the AUTHORITY or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

3.6 The CONSULTANT will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, evaluation of proposal, contracting and implementation of the contract.

3.7 The CONSULTANT will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

3.8 The CONSULTANT shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the AUTHORITY as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The CONSULTANT also undertakes to exercise due and adequate care lest any such information is divulged.

3.9 The CONSULTANT commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

3.10 The CONSULTANT shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

3.11 If the CONSULTANT or any employee of the CONSULTANT or any person acting on behalf of the CONSULTANT, either directly or indirectly, is a relative of any of the officers of the AUTHORITY, or alternatively, if any relative of an officer of AUTHORITY has financial interest/stake in the CONSULTANT's firm, the same shall be disclosed by the CONSULTANT at the time of filing of tender.

3.12 The CONSULTANT shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the AUTHORITY.

4. PREVIOUS TRANSGRESSION

4.1 The CONSULTANT declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify

CONSULTANT's exclusion from the tender process.

4.2 The CONSULTANT agrees that if it makes incorrect statement on this subject, CONSULTANT can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

5. BID SECURITY

5.1 While submitting commercial bid, the CONSULTANT shall deposit an amount of **INR 1,00,000/- (INR One Lakh Only)** as Bid Security with the AUTHORITY.

5.2 The Bid Security shall remain valid till the submission of performance guarantee by the successful CONSULTANT.

5.3 In case of the successful CONSULTANT, a clause would also be incorporated in the Performance Bank Guarantee that the provisions of Sanctions for Violation shall be applicable for forfeiture of Performance Bond in case of a decision by the CGRDC to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

5.4 Within 15 days of the receipt of notification of award from the Employer, the successful CONSULTANT shall furnish the Performance Security equal to 5% of the value of contract in the form of Bank Guarantee (as per Annexure-7) /TDR/FDR on any Scheduled Bank in India in favour of Managing Director, Chhattisgarh Road Development Corporation Limited, Raipur and payable at Raipur.

5.5 No interest shall be payable by the AUTHORITY to the CONSULTANT on Bid Security/ Performance Guarantee for the period of its currency.

6. SANCTIONS FOR VIOLATIONS

6.1 Any breach of the aforesaid provisions by the CONSULTANT or any one employed by it or acting on its behalf (whether with or without the knowledge of the CONSULTANT) shall entitle the AUTHORITY to take all or any one of the following actions, wherever required:-

(i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the CONSULTANT. However, the proceedings with the other CONSULTANT(s) would continue.

(ii) The Bid Security (in pre-contract stage) and/or Performance Security (after the contract is signed) shall stand forfeited either fully or partially, as decided by the AUTHORITY and the AUTHORITY shall not be required to assign any reason thereof.

(iii) To immediately cancel the contract, if already signed, without giving any

compensation to the CONSULTANT.

(iv) To recover all sums already paid by the AUTHORITY, and in case of an Indian CONSULTANT with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a CONSULTANT from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the CONSULTANT from the AUTHORITY in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.

(v) To en-cash the advance bank guarantee and performance bond/warranty bond, if furnished by the CONSULTANT, in order to recover the payments, already made by the AUTHORITY, along with interest.

(vi) To cancel all or any other Contracts with the CONSULTANT. The CONSULTANT shall be liable to pay compensation for any loss or damage to the AUTHORITY resulting from such cancellation/rescission and the AUTHORITY shall be entitled to deduct the amount so payable from the money(s) due to the CONSULTANT.

(vii) To debar the CONSULTANT from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the AUTHORITY.

(viii) To recover all sums paid in violation of this Pact by CONSULTANT(s) to any middleman or agent or broker with a view to securing the contract.

(ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the AUTHORITY with the CONSULTANT, the same shall not be opened.

(x) Forfeiture of Performance Bond in case of a decision by the AUTHORITY to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

6.2 The AUTHORITY will be entitled to take all or any of the actions mentioned at para 6.1 (i) to (x) of this Pact also on the Commission by the CONSULTANT or any one employed by it or acting on its behalf (whether with or without the knowledge of the CONSULTANT), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the AUTHORITY to the effect that a breach of the provisions of this Pact has been committed by the CONSULTANT shall be final and conclusive on the CONSULTANT. However, the CONSULTANT can approach the Independent Monitor(s) appointed for the purposes of this Pact.

7. FALL CLAUSE

7.1 The CONSULTANT undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present proposal in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/systems or subsystems was supplied by the CONSULTANT to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the CONSULTANT to the AUTHORITY, if the contract has already been concluded.

8. INDEPENDENT MONITORS

8.1 The AUTHORITY will appoint Independent Monitors (hereinafter referred to as Monitors) for this Pact.

8.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

8.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

8.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

8.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the AUTHORITY.

8.6 The CONSULTANT accepts that the Monitor has the right to access without restriction to all Project documentation of the AUTHORITY including that provided by the CONSULTANT. The CONSULTANT will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the CONSULTANT/Subcontractor(s) with confidentiality.

8.7 The AUTHORITY will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

8.8 The Monitor will submit a written report to the AUTHORITY within 8 to 10 weeks from the date of reference or intimation to him by the AUTHORITY/CONSULTANT and, should the occasion arise, submit proposals for correcting problematic situations.

9. FACILITATION OF INVESTIGATION

In case of any allegation of violation of any provisions of this Pact or payment of commission, the AUTHORITY or its agencies shall be entitled to examine all the documents including the Books of Accounts of the CONSULTANT and the CONSULTANT shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

10. LAW AND PLACE OF JURISDICTION

This Pact is subject to Indian Law. The place of performance and jurisdiction is only Raipur (Chhattisgarh).

11. OTHER LEGAL ACTIONS

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

12. VALIDITY

12.1 The validity of this Integrity Pact shall be from date of its signing and extend the complete execution of the contract to the satisfaction of both the AUTHORITY and the CONSULTANT/Seller, including warranty period, whichever is later, in case CONSULTANT is unsuccessful, this integrity Pact shall expire after six months from the date of the signing of the contract.

12.2 Should one or several provisions of this Pact turn out to be invalid, the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

For and on behalf of the CONSULTANT

(Name & Signature of the Authorized Signatory)

_____

Date:

6. PRE-PROPOSAL CONFERENCE

6.1 Pre-Proposal Conference of the Applicants shall be convened at the designated date, time and place. Only those Applicants, who have purchased the RFP document or downloaded the same from the Official Website of the Authority, shall be allowed to participate in the Pre-Proposal Conference. A maximum of two representatives of each Applicant shall be allowed to participate on production of an authority letter from the Applicant.

6.2 During the course of Pre-Proposal Conference, the Applicants will be free to seek clarifications and make suggestions for consideration of the Authority. The Authority shall endeavour to provide clarifications and such further information as it may, in its sole discretion, consider appropriate for facilitating a fair, transparent and competitive Selection Process.

7. MISCELLANEOUS

7.1 The Selection Process shall be governed by, and construed in accordance with, the laws of India and the Courts in Raipur shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the Selection Process.

7.2 The Authority, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to:

(a) suspend and/or cancel the Selection Process and/or amend and/or supplement the Selection Process or modify the dates or other terms and conditions relating thereto;

(b) consult with any Applicant in order to receive clarification or further information;

(c) retain any information and/or evidence submitted to the Authority by, on behalf of and/or in relation to any Applicant; and/or

(d) independently verify, disqualify, reject and/or accept any and all submissions or other information and/or evidence submitted by or on behalf of any Applicant.

7.3 It shall be deemed that by submitting the Proposal, the Applicant agrees and releases the Authority, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/or performance of any obligations hereunder, pursuant hereto and/or in connection herewith and waives any and all rights and/or claims it may have in this respect, whether actual or contingent, whether present or future.

7.4 All documents and other information supplied by the Authority or submitted by an Applicant shall remain or become, as the case may be, the property of the Authority. The Authority will not return any submissions made hereunder. Applicants are required to treat all such documents and information as strictly confidential.

7.5 The Authority reserves the right to make inquiries with any of the clients listed by the Applicants in their previous experience record.

SCHEDULES

SCHEDULE–1
(See Clause 1.1.3)

SCHEDULE 1

Terms of Reference (TOR)

for

Consultant

8. Terms of Reference (TOR) for Part 1 (DPR Works)

Part 1: Preparation of Detailed Project Report for Construction of road/expressway with BRTS Corridor on existing Fafadih-Telibandha-Naya Raipur Narrow Gauge railway Track.

8.1 General

- Chhattisgarh Road Development Corporation Limited (CGRDC), Raipur (the "Authority") is engaged in the development of roads in the state of Chhattisgarh and as part of this endeavour, the Authority has decided to undertake the construction of road along the abandoned Fafadih - Telibandha - Naya Raipur narrow gauge railway.. CGRDC has been mandated by the Government of Chhattisgarh for construction of Fafadih - Telibandha - Naya Raipur Road. In this regard, CGRDC is desirous to appoint a Consultant for "**Preparation of Detailed Project Report (DPR) and Project Management Consultancy for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track**" (the "**Project**").

8.2 Objective

The main objective of the consultancy service is to prepare a Detailed Project Report (DPR) for the construction of Road / Expressway with BRTS corridor on the existing Fafadih - Telibandha - Naya Raipur Narrow gauge railway track involving:

(i) Alignment study, survey, comparison, fixation, finalisation and its submission & approval from Competent Authority/Authorities.

(ii) Study, analysis, economics of different land pooling/procurement models for Highway project, nodal development projects along the Highway & utility services along the Highway independently.

(iii) Preparation, submission & approval of Detailed Project Report along with detailed estimate of approved alignment and its approval.

(iv) The Consultant shall also carry out various options viz.

(a) Construction of an expressway

(b) Construction of Expressway with BRTS corridor etc.

(c) Construction of 4 lane road with BRTS corridor etc.

on existing Fafadih - Telibandha - Naya Raipur narrow gauge Railway Track.

(v) The Consultant shall explore the options of providing accessibility to the proposed road from the adjacent private areas in the proximity of the proposed road alignment and also explore the option of charging development fee / surcharge from the users neighbouring areas that directly get benefited by the proposed road/ expressway.

(vi) The consultant should ensure Detailed Project Report preparation incorporating aspects of value engineering, quality audit and safety audit requirement in design and implementation.

(vii) The consultant should, along with Detailed Project Report, clearly bring out the Details

of available Govt. land i.e. central (Railway Department) and state (Revenue), encroachment on available land and rehabilitation and resettlement plan.

(viii) The consultant should also give cost estimates along with Detailed Project Report

8.3 SCOPE OF SERVICES

8.3.1 The scope of services for Part A shall comprise:

(i) Fixing of alignment and its approval.

(ii) Traffic surveys and demand assessment

(iii) Engineering surveys and investigations.

(iv) Study, analysis, economics of different land pooling/procurement models for Highway Project, nodal development projects along the Highway & utility services along the Highway independently and submission of land acquisition report.

(v) The Consultant shall also carry out various options viz.

(a) Construction of an expressway

(b) Construction of Expressway with BRTS corridor etc.

(c) Construction of 4 lane road with BRTS corridor etc.

on existing Fafadih - Telibandha - Naya Raipur narrow gauge Railway Track.

(vi) The Consultant shall explore the options of providing accessibility to the proposed road from the adjacent private areas in the proximity of the proposed road alignment and also explore the option of charging development fee / surcharge from the users neighbouring areas that directly get benefited by the proposed road/ expressway.

(vii) Location and layout of bus bays and bus shelters

(viii) Social impact assessment

(ix) Environment impact assessment

(x) Preliminary designs of road, bridges, interchanges, VUPs, PUPs, ROBs, RUBs, structures, etc.

(xi) Location and layout of connectors to tourist centres, important places, highways etc.

(xii) Preparation of Land Plan Schedules and Utility Relocation Plans

(xiii) Preparation of Land Plan showing available Govt. land, its encroachment and list of encroachments with rehabilitation and resettlement plan.

(xiv) Preparation of indicative BOQ and Detailed Cost Estimates

(xv) Preparation of conceptual plans for road-side amenities.

(xvi) Physical facilities necessary for Advance Traffic Management System (ATMS)

These services are briefly explained hereunder:

8.3.2 Fixing of alignment

The Consultant shall prepare the final alignment plan with the location (with design) of

interchanges, connectors, nodes and facilities (wayside amenities, automatic traffic control centres, etc) marked thereon, a Right of Way and land acquisition Plan.

Output: The final report, alignment plan and vertical profile overlaid on the satellite imageries. CGRDC's approval: the CGRDC will approve the final report as per the TOR.

8.3.3 TRAFFIC SURVEYS AND DEMAND ASSESSMENT

8.3.3.1 The Project Report of the Highway has to be established by a comprehensive transport demand study for the alignment selected by CGRDC for the purpose, assessment of the cost, revenue generation potential and financial return from the Project on basis of all possible financial models. The Project Report study shall include detailed survey and investigation, design outline and costing.

8.3.3.2 The Highway alignment has to be fixed after considering their relative advantages and disadvantages. The Consultants shall undertake the Detailed study on this selected alignment and carryout viability analysis for the estimated cost.

8.3.3.3 Major requirements of data/surveys for the tasks to be accomplished in course of the consulting services are enumerated below, but the surveys shall not be limited to the following primary data collection:

(i) Origin-destination survey of the vehicular traffic at appropriate locations;

(ii) Classified traffic volume counts for determining actual vehicular traffic flow along the homogeneous sections of the existing route between the terminal stations.

(iii) Classified traffic volume counts for determining actual cross traffic flow along the cross roads/intersections together with turning movements;

(iv) Vehicle speed distribution and journey time;

(v) Speed-flow relationship and the level of service;

(vii) Axle load survey.

(viii) Pedestrian/cattle crossing traffic count at all locations of settlements/ habitations along the Highway.

8.3.3.4 ***Traffic demand assessment***

(a) The Consultant shall make an assessment of the traffic demand for the Highway for a period of 10 (ten) years, 15 (fifteen) years, 20 (twenty) years and 30 (thirty) years respectively based on analysis of traffic counts, trend growth and growth in the influence area of the Highway. Normally, an annual growth rate of 5% (five per cent) shall be assumed. Any variation would have to be justified with reasons, including analysis of past trends.

(b) Based on the assessment of the traffic demand on the various sections of the Highway, the Consultant shall provide a broad assessment of the year in which more than four or more lanes may be required. The Consultant shall also provide sensitivity analysis due to change in assumption of traffic projections.

8.3.3.5 ***Intersection/connector traffic volume count and design***

(a) Volume count

For conducting the intersection/connector traffic volume count, the turning movement traffic surveys shall be carried out at all locations where the Highway intersects/meets the NH, SH, MDR or any other Road.

(b) Design

(i) The data at each location shall be presented and analysed to identify suitable treatment viz. grade separator without ramps or interchange with ramps in the light of warrants and criteria applicable to Highway. The connectors to important cities, industrial / mining hubs and tourist and pilgrimage centers shall be planned and proposed based on actual traffic potential. The type and layout proposed by the Consultant for each location shall be furnished along with the analysis supporting the same. Where an interchange with ramp is indicated by the analysis, its type should be determined keeping in view the site conditions.

(ii) The amount of additional land required, if any, at each of the interchanges/ connectors / amenities on the Highway shall be clearly stated and brought out.

(iii) For all cases where grade separators without ramps or interchanges/ connectors with ramps are proposed, the possibility of their provision on the Highway in a phased manner shall be duly examined and a report on the cost-effectiveness of the Consultant's proposal submitted for consideration of the CGRDC to enable it to specify such requirements in the relevant Schedules of the Concession Agreement.

8.3.3.6 ***Pedestrian/ Cattle crossing demand assessment***

For assessing the requirements of Pedestrian/ Cattle crossings, the traffic counts shall be carried out at the locations close to all habitations/ settlements along the Highway. The data so collected shall be analysed to determine whether any pedestrian/cattle crossing by way of underpass/ overpass is justified. If so, the locations and broad layout shall be proposed.

8.3.4 ENGINEERING SURVEYS AND INVESTIGATIONS

8.3.4.1 *The engineering surveys and investigations shall be divided into the following components:*

- Topographic, alignment and land use survey
- Soil, geo-technical, material, hydrology and drainage surveys

8.3.4.2 *Topographic, alignment and land use survey*

The detailed topographic survey of the alignment shall be done using Total Station and GPS and will be produced in both electronic format (in X, Y, Z coordinate system) and hard copies. Plans, longitudinal sections and cross-sections shall be prepared to the scale prescribed in IRC/MORT&H standards. All the existing and proposed features, such as land-use, limits of right-of-way, embankment, structures, intersecting roads, existing utilities, interchange loops and ramps, access roads, connectors, wayside amenities, operation and maintenance infrastructure, safety structures, etc. shall be shown on kilometer-wise plans.

The activities and Deliverables forming part of the topographic, alignment and land use survey are described below (see also Attachment/ Supplement-I, II, III to the TOR):

(a) Divide the Highway into various stretches as per terrain classification.

(b) Identify sections of Highway which fall within the area of lake or other water bodies (Condition of environment: alternate wetting and drying due to lake or other water bodies; alternate wetting and drying combined with freezing; buried in soil having corrosive effect; members of structures in contact with water where the velocity of flow and the bed material are likely to cause erosion of concrete.

(c) Identify sections of Highway which fall within urban limits and there requirements as per guidelines for Highway.

(d) Identify sections of Highway which require raising. Such sections will be identified with attention being paid to the previous history of submergence and the extent to which the subgrade is likely to be affected by the capillary action if the section is not raised.

(e) As far as possible, the proposed alignment would be retained subject to the following requirements:

  (i) Identify stretches which do not meet the criterion of ruling design speed, i.e. where radii of horizontal curves are less than desirable minimum. Prepare realignment plans for improving geometrics in such stretches.

  (ii) Identify stretches out of (i) above, which meet the criterion of minimum design speed, i.e. where the radii of horizontal curves are more than the absolute minimum (This will enable the CGRDC to take a view on whether to include such stretches for improving geometrics in the initial stage or these can be postponed by a few years and in the meantime steps can be taken to acquire the necessary land for the ROW).

  (iii) Identify stretches where extra width of roadway and carriageway at curves is required.

(f) Identify and other grade separated structures and their approaches. Work out proposal for location of such structures and alignment of approaches.

(g) Prepare alignment plans, L-Sections and cross-sections of the entire Highway. Scale of drawings shall be as per IRC:SP:1977.

(h) The width of the right-of-way for the Highway shall be determined on the basis of

the proposed cross-section and future expansion needs. Additional land that is required for interchanges, connectors, nodal development centers, wayside amenities and operation and maintenance infrastructure, etc. shall be determined. Preparation of land plan schedules for taking up land acquisition shall be an important part of the services. These schedules shall be prepared on the basis of revenue maps and shall include the details of survey numbers coming under acquisition.

Consultant shall submit detailed location wise, various suitable land acquisition models with their due comparisons and recommendation. After approval of location wise land acquisition model by CGRDC, the Consultant shall proceed with initial stages of implementation of land acquisition.

The Land Plan should also show encroachments, if any. A list of such encroachments along with their brief description shall also be prepared and included in the Project Report.

(i) For total land proposed to be acquired, the Land Plans shall be marked on duly certified village maps showing khasra numbers and shall be furnished along with a report which will include detailed schedules in respect of the proposed acquisition of land holdings as per revenue records in a format that would enable the Consultant to initiate land acquisition proceedings.

(j) It is also planned to declare CGRDC as Special Planning Authority (SPA) for land parcel along the approved alignment. In this regards, the Consultant shall procure and submit the village wise land plans for the strip of 5 kilometer on either side of approved alignment from the edge of ROW along with Village, Taluka& District wise area statement for throughout the alignment.

(k) A set of cross-sections of the existing alignment including urban sections at one km intervals for each homogeneous section in plain/rolling terrain and at 100 m intervals in mountainous/steep terrain shall be provided by the Consultant. In plain/ rolling terrain, additional cross-sections shall be provided for curves at the start, at the middle and at the end. These cross-sections along with proposed improvement plan and preliminary design shall form the basis of preparation of indicative BOQ for the Highway.

8.3.4.3 *Soil, geotechnical, material, hydrology and drainage surveys*

The activities and Deliverables forming part of the soil, geotechnical, material, hydrology and drainage surveys are described below:

(a) The characteristics of the existing soil, two samples from every 5(five) km of the Highway or closer where change in soil type is encountered.

(b) The determination of sub-grade CBR (soaked) every three km of the Highway or closer where change in soil type is encountered.

(c) Investigations of the subsoil strata (one trial bore and/or test pit at embankment and one in river bed at locations where new bridges or other structures are proposed. The depth of trial bore/ test pit shall be as per IRC standards).

(d) Preliminary hydraulic data for bridges, design discharge, HFL, LWL, etc. with a view to checking adequacy of existing waterway.

(e) Preparation of GAD for hydraulic structures (major/minor bridges, slab drainage), interchanges and ROBs got it approved for CGRDC/Competent Authority.

(f) A broad assessment of the drainage condition and requirement of the Highway.

(g) Soil and material survey shall be carried out after identifying the material sources, preferably after consulting the satellite imageries. The study shall include plans for rehabilitation of borrow areas and quarries from which construction materials will be extracted. Subsoil investigation shall be carried out as per IRC and BIS codes for design of structures.

(h) Detailed hydraulic investigations shall be done for the design of drainage and cross drainage structures. Hydraulic design of structures shall be for the maximum floods of 100 year return period. The hydraulic investigations shall supplement the data obtained through satellite imageries. The design discharge shall be determined using various methods (e.g. Area – velocity method, Catchments area method, Unit Hydrograph method)

8.3.5 Proposal for Sections passing through urban areas

For stretches passing through urban areas, the Consultant shall prepare an improvement plan of the stretch as per guidelines of Highway Possibility of providing service roads shall also be explored and indicated. If there is any constraint due to available ROW or additional land to be acquired, the same shall be brought to the attention of the CGRDC on immediate basis.

8.3.6 ROBs/RUBs

The Consultant shall identify all locations of the existing and proposed railway level crossings on the Highway. Data regarding number of closures per day shall be provided. Normally, all level crossings are to be replaced with ROBs/RUBs. The Consultant shall prepare and submit GADs of the proposed ROBs/RUBs including viaduct portion in the approaches based on preliminary consultation with the railway authorities concerned. (The GAD of ROBs/RUBs existing or under construction in the vicinity of the Highway could also be kept in view).

8.3.7 Traffic Control

Consultant shall suggest various methodologies for Traffic control along with their comparison based on feasibility and cost with due recommendation as per IRC guidelines and prevailing National and International practices.

8.3.8 Protective works in hill sections, retaining walls, breast walls, etc.

For the stretches passing through hills, the Consultant shall identify the broad requirements of retaining walls, breast walls, etc. for the purposes of preparing cost estimates.

8.3.9 Road signs, safety devices

(a) The Consultant shall propose provision of Road Signs, Pavement Markings, Safety

Barriers, Railings, Delineators, Chevron Markings, Traffic Attenuators, Road Boundary Stones, Km Stones, 200 m Stones. It shall also include Crash Barriers for existing bridges.

(b) The Consultant shall propose overhead signs on the Highway and provide an outline of the same giving size and location.

8.3.10 Bus bays and bus shelters

The Consultant shall undertake field surveys and identify suitable locations for provision of bus bays and bus shelters on the Highway. As far as possible, bus bays shall not be located on horizontal curves, summit of vertical curves and bridges. Good visibility must be ensured. Further, the bus bays should not be too close to major intersections. The length of each such bus bay shall also be indicated.

The Consultant shall also indicate the locations of bus stands/bus stops provided by the concerned State Transport Authorities on the Highway.

8.3.11 Deciding the scope of future utilities crossing:-

The Consultant shall identify the probable location and space to accommodate for upcoming utilities of Central/ State/ Local/Private authorities. Consultant should give complete details of upcoming utilities or projects along and across proposed alignment of Highway. Provision and cost estimate in Feasibility report shall be considered. Future crossings across the road at an interval of 100 m. in urban areas and 500 m. in non-urban areas as per MORT&H guidelines.

8.3.12 Social impact assessment

The Consultant shall undertake social impact assessment on the Highway, especially the persons affected due to the Project and requiring resettlement and rehabilitation. The extant policies and guidelines of the government would be kept in view while undertaking the assessment. He shall prepare a plan for involuntary resettlement and land acquisition, which shall include the following:

(a) Prepare in accordance with guidelines of the Government, a draft Resettlement and Land Acquisition Plan;

(b) Prepare area specific social assessments to support development of a locally relevant approach to resettlement which provides benefits to people in the Project's area of influence, which include socioeconomic conditions, social service infrastructure, and social institutions and organization, in accordance with the Government policies and guidelines;

(c) These social assessments should include gender and local ethnic aspects;

(d) Provide recommendations and action plan for the Concessionaire to undertake, at the detailed design stage, a full census and inventory of lost assets (households, shops and agricultural and other lands, or access to current income-generating activities, including impacts caused by permanent or temporary acquisition) of affected people and a baseline socioeconomic survey of the affected population. Determine the scope and magnitude of likely resettlement and land acquisition effects, and list likely losses of households, agricultural lands, business and income opportunities, as well as

affected communal assets and public buildings;

(e) In consultation with local stakeholders, government and the CGRDC, develop an entitlement matrix, on the basis of the consultations, socio-economic surveys, and inventories of losses that will determine the amount of compensation in accordance with the guidelines and policies of the Government;

(f) Prepare the plans with full stakeholder participation, including the Government and the CGRDC. Consult with affected persons and community-based organizations to ensure that all affected persons have been fully informed of their entitlements through the consultative processes initiated by the Government and the CGRDC. Ensure that communities and displaced persons understand the project, its impacts, and the responsibilities of the parties; and Analyse and confirm the following aspects that will apply to land acquisition and resettlement in the project area:

(i) laws and regulations, including local practices;

(ii) budgetary processes for involuntary resettlement and land acquisition;

(iii) schedules for these activities that are coordinated with the construction schedule; and

(iv) administrative arrangements and requirements.

8.3.13 Environment impact assessment

(a) The Consultant shall undertake environment impact assessment of the Highway as per provisions of the Applicable Laws on environment protection and identify a package of measures to reduce/eliminate the adverse impact identified during the assessment. An environmental impact assessment report and environmental management plan shall be prepared based on such assessment. The management plan shall include project specific mitigation and monitoring measures for identified impacts as well as management and monitoring plans to address them.

(b) The Consultant shall also assist the CGRDC in conducting public hearings and addressing the comments and suggestions received during the EIA process with a view to getting environmental clearance from the competent authority.

(c) Alignment selection has been done after a thorough study of the corridor features through maps, satellite imageries etc. As such, the study should include the aspect to ensure that the surface runoff obstructed by the Highway embankment is properly diverted to the streams where it is destined to, by a system of longitudinal drains discharging into these streams. Environmentally and ecologically sensitive areas, water bodies, forests and heritage structures have been identified through the satellite imageries and care has been taken that alignment should not pass through such areas. As far as possible, acquisition of agricultural land has been minimized and alignment is taken through wasteland. However, in the detailed study, any problem associated with the alignment will have to be identified by the Consultant and a suitable solution will be proposed by the Consultant.

8.3.14 Preliminary designs

The Consultant shall arrive at the preliminary designs of various components of the Highway keeping in view the requirements of the IRC Manual and the scope of services described in this TOR. It shall be responsible for the accuracy of the physical details such as alignment, right of way, abutting land use, assets within the right of way including safety devices, utilities, trees, service roads, cross drainage structures, etc. The layout and preliminary designs shall be supplemented with explanatory drawings, statements, charts, notes as necessary. As the reports submitted by the consultant shall form the basis for preparation of the bidding documents, all the essential elements thereof shall be proposed in various sections/stages of the report. These elements shall include, inter-alia,

(a) Design standards for the Highway.

(b) Operation standards including real time traffic information, monitoring, contract, incident management.

(c) Safety standards including lighting of appropriate areas (interchanges, wayside amenities, operation base, etc.), safety during maintenance operations/incident management, inclement weather, ventilation and lighting of tunnel (if any).

(d) Maintenance standards for all the facilities, appropriate levels of maintenance, timing/frequency of maintenance interventions.

(e) Specifications, testing methods and acceptance criteria for design, construction, maintenance and operation.

8.3.15 Project cost

Preliminary cost estimation of the Highway based on the alignment and cross-section shall be done. The Consultant shall work out indicative BOQ of various components and prepare detailed cost estimates of the Highway with a break up of cost for each component separately. To the construction cost so arrived at, the Consultant may add 15% (Fifteen per cent) thereof as a lumpsum provision for physical and price contingencies, interest during construction and other financing costs, pre-construction expenses etc.

8.4 General

8.4.1 Primary Tasks

General Scope of Services shall cover but be not limited to the following major tasks (additional requirements for Preparation of Detailed Project Report for Hill Roads and Major Bridges are given in **Supplement I** and **II** respectively):

i. Review of all available reports and published information about the project Highway and the project influence area;

ii. Environmental and social impact assessment, including such as related to cultural properties, natural habitants, involuntary resettlement etc.

ii (a). **Public consultation, including consultation with Communities located along the road, NGOs working in the area, other stake-holders and relevant Govt. deptts at all the different stages of assignment (such as inception stage, feasibility stage, preliminary design stage and once final designs are** concretized).

iii. detailed reconnaissance;

iv. identification of possible improvements in the existing alignment and bypassing congested locations with alternatives, evaluation of different alternatives comparison on techno-economic and other considerations and recommendations regarding most appropriate option;

v. traffic studies including traffic surveys and Axle load survey and demand forecasting for next thirty years;

vi. inventory and condition surveys for road;

vii. inventory and condition surveys for bridges, cross-drainage structures, other Structures, river Bank training/Protection works and drainage provisions;

viii. detailed topographic surveys using Total Stations and GPS;

ix. Pavement investigations;

x. sub-grade characteristics and strength: investigation of required sub-grade and sub-soil characteristics and strength for road and embankment design and sub soil investigation;

xi. identification of sources of construction materials;

xii. detailed design of road, its x-sections, horizontal and vertical alignment and **design of embankment of height more than 6m and also in poor soil conditions and where density consideration require, even lesser height embankment.**

Detailed design of structures preparation of GAD and construction drawings and cross-drainage structures and underpasses etc.

xiii. identification of the type and the design of intersections;

xiv. design of complete drainage system and disposal point for storm water

xv. value analysis / value engineering and project costing;

xvi. economic analyses;

xvii. contract packaging and implementation schedule.

xviii. strip plan indicating the scheme for carriageway widening, location of all existing utility services (both over- and underground) and the scheme for their relocation, trees to be felled, transplanted and planted and land acquisition requirements including schedule for LA: reports documents and drawings arrangement of estimates for cutting/ transplanting of trees and shifting of utilities from the concerned department;

xix. Preparation of Feasibility report, cost estimate, approved for construction drawings, rate analysis, detailed bill of quantities, bid documents for execution of civil works.

xx. Design of parking areas and rest areas.

xxi. Tie-in of on-going / sanctioned works of MORT&H / NHAI / PWD / CGRDC / other agencies.

xxii. Preparation of social plans for the project affected people as per policy of the lending agencies/ Govt. of Chhattisgarh R & R Policy.

8.4.2 While carrying out the field studies, investigations and design, the development plans being implemented or proposed for future implementation by the local bodies, should be taken into account. Such aspect should be clearly brought out in the reports and drawings.

8.4.3 The consultant shall study the possible locations and design of wayside amenities required

and arboriculture along the highway shall also be planned.

8.4.4 The local and slow traffic may need segregation from the main traffic and provision of service roads and physical barrier including fencing may be considered, wherever necessary to improve efficiency and safety.

8.4.5 Standards and Codes of Practices

1. All activities related to field studies, design and documentation shall be done as per the latest guidelines/ circulars of MoRT&H and relevant publications of the Indian Roads Congress (IRC) and Bureau of Indian Standards (BIS). For aspects not covered by IRC and BIS, international Codes & standards practices, may be adopted. The Consultants, upon award of the Contract, may finalise this in consultation with CGRDC and reflect the same in the inception report.

2. All notations, abbreviations and symbols used in the reports, documents and drawings shall be as per IRC:71:1977.

8.4.6 Quality Assurance Plan (QAP)

1. The Consultants should have detailed Quality Assurance Plan (QAP) for all field studies including topographic surveys, traffic surveys, engineering surveys and investigations, design and documentation activities. The quality assurance plans/procedures for different field studies, engineering surveys and investigation, design and documentation activities should be presented as separate sections like engineering surveys and investigations, traffic surveys, material geo-technical and sub-soil investigations, road and pavement investigations, drawings and documentation, preparation, checking, approval and filing of calculations, identification and tractability of project documents etc. Further, additional information as per format shall be furnished regarding the details of personal who shall be responsible for carrying out/preparing and checking/verifying various activities forming part of feasibility study and project preparation, since inception to the completion of work. The detailed Draft QAP Document must be discussed and finalised with the concerned CGRDC officers immediately upon the award of the Contract and submitted as part of the inception report.

2. It is imperative that the QAP is approved by CGRDC before the Consultants start the field work.

8.4.7 Review of Data and Documents

The Consultants shall collect the available data and information relevant for the Study. The data and documents of major interest shall include, but not be limited to, the following:

i. Climate;

ii. condition of bridges and cross-drainage structures;

iii. sub-surface and geo-technical data for existing bridges;

iv. hydrological data, drawings and details of existing bridges;

v. **Existing geological maps, catchment area maps, contour plans etc. for the project area**

vi. Condition of existing river bank / protection works, if any.

vii. details of sanctioned / on-going works on the stretch sanctioned by MoRT&H /NHAI/PWD and other agencies for Tie-in purposes

viii. survey and evaluation of locally available construction materials;

ix. historical data on classified traffic volume (preferably for 5 years or more);

x. origin-destination and commodity movement characteristics; if available;

xi. speed and delay characteristics; if available;

xii. commodity-wise traffic volume; if available;

xiii. accident statistics; and,

xiv. vehicle loading behavior (axle load spectrum), if available.

xv. Irrigation structures and crossing, submergence zones & catchment area, existing and proposed canal network and irrigation projects.

xvi. Type and location of existing utility services (e.g. Fibre Optical Cable, O/H and U/G Electric, Telephone line, Water mains, Sewer, Trees etc.)

xvii. Existing and proposed Government and non-Government projects.

xviii. **Environmental setting and social baseline of the project.**

8.4.8 Social Analysis

The social analysis study shall be carried out in accordance with the MORT&H/World Bank/Govt. of Chhattisgarh/ADB/JICA Guidelines. The social analysis report will, among other things, provide a socio-economic profile of the project area and address in particular, indigenous people, communicable disease particularly HIV/AIDS poverty alleviation, gender, local population, industry, agriculture, employment, health, education, health, child labour, land acquisition and resettlement .

8.4.9 Traffic Surveys

All traffic surveys and studies will be completed in feasibility studies.

8.4.9.1 Number and Location of Survey Stations

1. The type of traffic surveys and the minimum number of survey stations shall normally be as under, unless otherwise specifically mentioned.

S. No.	Description	Number of Survey Stations
1.	Classified Traffic Volume Count	3
2.	Origin-Destination and Commodity Movement Characteristics	Minimum 2
3.	Axle Loading Characteristics	2
4.	Intersection Volume Count	All Major Intersections
5.	Speed-Delay Characteristics	Project Road Section
6.	Pedestrian/animal cross traffic count	All major inhabitations along the highway

2. The number of survey locations indicated in the table above are indicative only. The

Consultants shall, immediately upon award of the work, submit to CGRDC proposals regarding the total number as well as the locations of the traffic survey stations as put of inception report. Suitable maps and charts should accompany the proposals clearly indicating the rationale for selecting the location of survey stations.

3. The methodology of collection and analysis of data, number and location of traffic survey stations shall be finalised in consultation with CGRDC.

8.4.9.2 Classified Traffic Volume Count Survey

1. The classified traffic volume count surveys shall be carried out for 7 days (continuous, direction-wise) at the selected survey stations. The vehicle classification system as given in relevant IRC code may be followed. However, the following generalized classification system is suggested in view of the requirements of traffic demand estimates and economic analysis:

<table>
<tr><td colspan="3">Motorised Traffic</td><td>Non-Motorised Traffic</td></tr>
<tr><td colspan="3">2-Wheeler</td><td>Bi-Cycle</td></tr>
<tr><td colspan="3">3-Wheeler</td><td>Cycle-Rickshaw</td></tr>
<tr><td colspan="3">Passenger Car</td><td>Animal Drawn Vehicle (ADV)</td></tr>
<tr><td colspan="3">Utility Vehicle (Jeep, Van etc.)</td><td>Hand Cart</td></tr>
<tr><td colspan="3">Bus
Mini Bus
Standard Bus</td><td>Other Non-Motorised Vehicle</td></tr>
<tr><td>LCV</td><td colspan="2">LCV-Passenger
LCV-Freight</td><td></td></tr>
<tr><td>Truck</td><td colspan="2">MCV : 2-Axle Rigid Chassis
HCV : 3-Axle Rigid Chassis</td><td></td></tr>
<tr><td></td><td>MAV</td><td>Semi Articulated
Articulated</td><td></td></tr>
</table>

2. All results shall be presented in tabular and graphical form. The survey data shall be analysed to bring out the hourly and daily variations. The traffic volume count per day shall be averaged to show a weekly Average Daily Traffic (ADT) by vehicle type. The Annual Average Daily Traffic (AADT) shall be worked out by applying seasonal factors.

3. The consultants shall compile the relevant traffic volume data from secondary sources also. The salient features of traffic volume characteristics shall be brought out and variations if any, from the traffic census carried out by the Chhattisgarh State PWD shall be suitably explained.

8.4.9.3 Origin-Destination and Commodity Movements Surveys

1. The Consultants shall carry out 1-day (24 hour, both directions) O-D and

Commodity Movement Surveys at locations finalised in consultation with CGRDC. These will be essentially required around congested towns to delineate through traffic. The road side interviews shall be on random sample basis and cover all four-wheeled vehicles. The locations of the O-D survey and Commodity Movement surveys shall normally be same as for the classified traffic count stations.

2. The location of origin and destination zones shall be determined in relation to each individual station and the possibility of traffic diversion to the Project Road from/to other road routes including bypasses.

3. The trip matrices shall be worked out for each vehicle type information on weight for trucks should be summed up by commodity type and the results tabulated, giving total weight and average weight per truck for the various commodity types. The sample size for each vehicle type shall be indicated on the table and also in the graphical representations.

4. The data derived from surveys shall also be analysed to bring out the lead and load characteristics and desire line diagrams. The data analysis should also bring out the requirement for the construction of bypasses.

5. The distribution of lead and load obtained from the surveys should be compared with those derived from the axle load studies.

6. The commodity movement data should be duly taken into consideration while making the traffic demand estimates.

7. The Consultant shall carryout traffic volume for various destinations from either ends along the existing road network via alternate routes in the Fafadih - Telibandha - Naya Raipur corridor to assess demand potential for proposed Highway.

8.4.9.4 Turning Movement Surveys

1. The turning movement surveys for estimation of peak hour traffic for the design of major and minor intersections shall be carried out for the Study. The details regarding composition and directional movement of traffic shall be furnished by the Consultant.

2. The methodology for the surveys shall be as per IRC: SP: 41-1994. The details including location and duration of surveys shall be finalized in consultation with CGRDC officials. The proposal in response to this TOR shall clearly indicate the number of locations that the Consultants wish to conduct turning movement surveys and the rationale for the same.

3. The data derived from the survey should be analysed to identify requirements of suitable remedial measures, such as construction of underpasses, flyovers, interchanges, connectors, grade-separated intersections along the project road alignment. Intersections with high traffic volume requiring special treatments either presently or in future shall be identified.

8.4.9.5 Axle Load Surveys

1. Axle load surveys in both directions shall be carried out at suitable location(s) in

the project area road stretches on a random sample basis normally for trucks only (both empty and loaded trucks) for 2 normal days - (24 hours) at special count stations to be finalised in consultation with CGRDC. However, a few buses may be weighed in order to get an idea about their loading behavior. While selecting the location(s) of axle load survey station(s), the locations of existing bridges with load restrictions, if any, should be taken into account and such sites should be avoided.

2. The axle load surveys shall normally be done using axle load pads or other sophisticated instruments. The location(s) of count station(s) and the survey methodology including the data formats and the instrument type to be used shall be finalised before taking up the axle load surveys.

3. The axle load data should be collected axle configuration-wise. The number of equivalent standard axles per truck shall be calculated on the basis of results obtained. The results of the survey should bring out the VDF for each truck type (axle configuration, if the calculated VDF is found to be below the national average, then national average shall be used. Furthermore, the data from axle load surveys should be analysed to bring out the Gross Vehicle Weight (GVW)and Single Axle Load (SAL) Distributions by truck type (axle configuration).

4. The Consultant shall ascertain from local enquiries about the exceptional live loads that have used the highway in the past in order to assess the suitability of existing bridges to carry such loads. The Consultant shall ascertain and forecast exceptional live load that may ply on the Highway in future.

8.4.9.6 Speed-Delay Surveys

The Consultants shall carry out appropriate field studies such as moving car survey to determine running speed and journey speed in existing road network in the vicinity. The data should be analysed to identify sections with typical traffic flow problems and congestion. The objective of the survey would be to recommend suitable measures for segregation of local traffic, smooth flow of through traffic and traffic safety. These measures would include the provision of bypasses, under-passes, flyovers, interchanges, grade-separated intersections and service roads.

8.4.9.7 Pedestrian / animal cross traffic surveys:

These may be conducted to determine if provision of viaduct for pedestrians/animals is necessary to improve the traffic safety.

8.4.9.8 Truck Terminal Surveys

The data derived from the O-D, speed-delay, other surveys and also supplementary surveys should be analysed to assess requirements for present and future development of truck terminals at suitable locations enroute.

8.4.10 Traffic Demand Estimates

1. The consultants shall make traffic demand estimates and establish possible traffic growth rates in respect of all categories of vehicles, taking into account the past trends, annual population and real per capita growth rate, elasticity of transport demand in relation to income and estimated annual production increase. The other aspects including socio-economic development plans and

the land use patterns of the region having impact on the traffic growth, the projections of vehicle manufacturing industry in the country, development plans for the other modes of transport, O-D and commodity movement behavior should also be taken into account while working out the traffic demand estimates.

2. The values of elasticity of transport demand shall be based on the prevailing practices in the country. The Consultants shall give complete background including references for selecting the value of transport demand elasticity.

3. It is envisaged that the 3-laning of the project road sections covered under this TOR would be completed and opened to traffic after 3 years. The traffic demand estimates shall be done for a further period of 30 years from completion of 3-lane. The demand estimates shall be done assuming three scenarios, namely, optimistic, pessimistic and most likely traffic growth. The growth factors shall be worked out for five-yearly intervals.

4. Traffic projections should be based on sound and proven forecasting techniques. In case traffic demand estimated is to be made on the basis of a model, the application of the model in the similar situation with the validation of the results should be established. The traffic projections should also bring out the possible impact of implementation of any competing facility in the near future. The demand estimates should also take into account the freight and passenger traffic along the major corridors that may interconnect with the project.

5. The methodology for traffic demand estimates described in the preceding paragraphs is for normal traffic only. In addition to the estimates for normal traffic, the Consultants shall also work out the estimates for generated, induced and diverted traffic.

6. The traffic forecasts shall also be made for both diverted and generated traffic.

7. Overall traffic forecast thus made shall form the basis for the design of each pavement type and other facilities/ancillary works.

8.4.11 Engineering Surveys and Investigations

8.4.11.1 Reconnaissance and Alignment

1. The Consultants should make an in-depth study of the available landwidth (ROW) topographic maps, satellite imageries and air photographs of the project area, geological maps, catchment area maps, contour plans, flood flow data and seismological data and other available relevant information collected by them concerning the existing alignment. Consultant himself has to arrange the required maps and the information needed by him from the potential sources. Consultant should make efforts for minimizing land acquisition.

2. The detailed ground reconnaissance may be taken up immediately after the study of maps and other data. The primary tasks to be accomplished during the reconnaissance surveys include;

   i topographical features of the area;

   ii. typical physical features along the existing alignment within and outside ROW i.e. land use pattern;

iii. possible alignment alternatives, vis-a-vis, scheme for the construction of additional lanes parallel to the existing alignment;

iv. realignment requirements including the provision of bypasses, ROBs / Flyovers and via-duct for pedestrian crossings with possible alignment alternatives;

v. preliminary identification of improvement requirements including treatments and measures needed for the cross-roads;

vi. traffic pattern and preliminary identification of traffic homogenous links;

vii. sections through congested areas;

viii. inventory of major aspects including land width, terrain, pavement type, carriageway type, bridges and structures (type, size and location), intersections(type, cross-road category, location) urban areas (location, extent), geologically sensitive areas, environmental features:

ix. critical areas requiring detailed investigations; and,

x. requirements for carrying out supplementary investigations.

xi. soil (textural classifications) and drainage conditions

xii. type and extent of existing utility services along the alignment (within ROW).

xiii. Typical physical features along the approach roads

xiv. Possible bridge locations, land acquisition problems, nature of crossings, likely length of approaches and bridge, firmness of banks, suitability of alignment of approach roads.

xv. Trial pits (including dewatering) of size 2m. x 2m. x 3m.depth (a) One for each CD work (b) Three for culverts / slab drains having linear waterway up to 10 m.

xvi. Double tube core bores for major / minor bridges, ROBs, Interchanges having waterway/ length more than 10 m minimum two at banks and at every pier locations.

3. The data derived from the reconnaissance surveys are normally utilized for planning and programming the detailed surveys and investigations. All field studies including the traffic surveys should be taken up on the basis of information derived from the reconnaissance surveys.

4. The data and information obtained from the reconnaissance surveys should be documented. The data analysis and the recommendations concerning alignment and the field studies should be included in the Inception Report. The data obtained from the reconnaissance surveys should form the core of the database which would be supplemented and augmented using the data obtained from detailed field studies and investigations.

5. The data obtained from the reconnaissance surveys should be compiled in the tabular as well as graphical (chart) form indicating the major physical features and the proposed widening scheme for CGRDC's comments. The data and the charts should also accompany the rationale for the selection of traffic survey stations.

8.4.11.2. Topographic Surveys

1. The basic objective of the topographic survey would be to capture the essential ground features along the alignment in order to consider improvements and for working out improvements, rehabilitation and upgrading costs. The detailed topographic surveys should normally be taken up after the completion of reconnaissance surveys.

2. The carrying out of topographic surveys will be one of the most important and crucial field tasks under the project. The detailed field surveys shall be carried out using high precision instruments i.e. Total stations. The data from the topographic surveys shall be available in (x, y, z) format for use in a sophisticated digital terrain model (DTM). The Consultants would be fully responsive for any inaccuracy in surveys.

3. The detailed field surveys would essentially include the following activities:

    i. Topographic Surveys along the existing/ proposed alignment Right of Way (ROW): Running a continuous open Traverse along the existing alignment and re-alignments, wherever required, and fixation of all cardinal points such as horizontal intersection points (HIP's), centre points and transit points etc. and properly referencing the same with a pair of reference pillars fixed on either side of the centre-line at safe places within the ROW.

    ii. The detailed field surveys would essentially include the topographic surveys along the proposed location of bridge and alignment of approach road.

    iii. The detailed topographic surveys should be carried out along the approach roads/new greenfield alignment and location of bridge approved by CGRDC/PWD.

    vi.. Collection of details for all features such as structures (bridges, culverts etc.) utilities, existing alignment, electric and telephone installations (both O/H as well as underground), huts, buildings, fencing and trees (with girth greater than 0.3metre) oil and gas lines etc. falling within the extent of survey.

4. The width of survey corridor will generally be as given under:

    i. The width of the survey corridor should take into account the layout of the existing/ proposed greenfield alignment including the extent of embankment and cut slopes and the general ground profile. While carrying out the field surveys, the widening scheme (i.e. right, left or symmetrical to the centre line of the existing carriageway) should be taken into consideration so that the topographic surveys cover sufficient width beyond the centre line of the proposed divided carriageway. Normally the surveys should extend a minimum of 30 m beyond either side of the centre line of the proposed divided carriageway or land boundary whichever is more.

    ii. In case the reconnaissance survey reveals the need for bypassing the

congested locations, the traverse lines would be run along the possible alignments in order to identify and select the most suitable alignment for the bypass. The detailed topographic surveys should be carried out along the bypass alignment approved by CGRDC. At locations where grade separated intersections could be the obvious choice, the survey area will be suitably increased. Field notes of the survey should be maintained which would also provide information about traffic, soil, drainage etc.

iii. The width of the surveyed corridor will be widened appropriately where developments and / or encroachments have resulted in a requirement for adjustment in the alignment, or where it is felt that the existing alignment can be improved upon through minor adjustments.

iv Where existing roads cross the alignments, the survey will extend a minimum of 100 m either side of the road centre line and will be of sufficient width to allow improvements, including at grade intersection to be designed.

5. The surveyed alignment as well as land acquired for nodes, amenities etc. shall be transferred on to the ground as under:

i. Reference Pillar and Bench Mark / Reference pillar of size 15 cm X 15 cm X 45cm shall be cast in RCC of grade M 15 with a nail fixed in the centre of the top surface. The reference pillar shall be embedded in concrete upto a depth of 30cm with CC M10 (5 cm wide all around). The balance 15 cm above ground shall be painted yellow. The spacing shall be 250m apart, incase Bench Mark Pillar coincides with Reference Pillar, only one of the two need be provided.

ii. Establishing Bench marks at site connected to GTS Bench marks at a interval of250 metres on Bench mark pillar made of RCC as mentioned above with RL and BM No. marked on it with red paint.

iii. **Boundary Pillars**- Wherever there is a proposal of realignment of the existing Highway and/or construction of New Bypasses, Consultant shall fix boundary pillars along the proposed alignment on the extreme boundary on either side of the Highway at 50 m interval.

8.4.11.2.1 Longitudinal and Cross-Sections

The topographic surveys for longitudinal and cross-sections shall cover the following:

i. Longitudinal section levels along final centre line at every 25 m interval, at the locations of curve points, small streams, intersections and at the locations of change in elevation.

ii. Cross sections at every 50 m interval in full extent of survey covering sufficient number of spot levels on existing carriageway and adjacent ground for profile correction course and earth work calculations. Cross sections shall be taken at closer interval at curves.

iii. Longitudinal section for cross roads for length adequate for design and quantity estimation purposes.

iv. Longitudinal and cross sections for major and minor streams shall cover cross section of the channel at the site of proposed crossing and few defined cross sections at suitable distance both upstream and downstream beyond H.F.L.. Bed levels upto top of banks and ground levels to a sufficient distance beyond the edges of channel, nature of existing surface soil in bed, banks & approaches, longitudinal section of channel showing site of bridge etc. These shall be as per recommendations contained in IRC Special Publication No. 13 (Guidelines for the Design of Small Bridges and Culverts) and provisions of IRC:5 ("Standard Specifications & Code of Practice for Road Bridges, Section 1 – General Features of Design").

8.4.11.2.2 Details of utility Services and Other Physical Features

1. The Consultants shall collect details of all important physical features along the alignment. These features affect the project proposals and should normally include buildings and structures, monuments, burial grounds, cremation grounds, places of worship, railway lines, stream / river / canal, water mains, severs, gas/oil pipes, crossings, trees, plantations, utility services such as electric, and telephone lines (O/H & U/G) and poles, optical fiber cables (OFC) etc. The survey would cover the entire right-of-way of the road on the adequate allowance for possible shifting of the central lines at some of the intersections locations.

2. The information collected during reconnaissance and field surveys shall be shown on a strip plan so that the proposed improvements can be appreciated and the extent of land acquisition with L.A schedule, utility removals of each type etc. assessed and suitable actions can be initiated. Separate strip plan for each of the services involved shall be prepared for submission to the concerned agency.

8.4.11.3. Road and Pavement Investigations

The Consultants shall carry out detailed field studies in respect of road and pavement. The data collected through road inventory and pavement investigations should be sufficient to meet the input requirements of HDM-IV.

8.4.11.3.1 Road Inventory Surveys

The data should be collected in sufficient detail. The data should be compiled and presented in tabular as well as graphical form. The inventory data would be stored in computer files using simple utility packages, such as EXCEL.

8.4.11.4. Inventory of Bridges, Culverts and Structures

The Consultants shall make an inventory of all the structures (bridges, viaducts, ROBs/RUB and other grade separated structures, culverts, etc.) along the road under the project. The inventory for the bridges, viaducts and ROBs shall include the parameters required as per the guidelines of IRC-SP: 35. The inventory of culverts shall be presented in a tabular form covering relevant physical and hydraulic parameters.

8.4.11.4.1 Hydraulic and Hydrological Investigations

1. The hydrological and hydraulic studies shall be carried out in accordance with

IRC Special Publication No. 13 ("Guidelines for the Design of Small Bridges and Culverts") and IRC:5 ("Standard Specifications & Code of Practice for Road

Bridges, Section I General Feature of Design"). These investigations shall be carried out for all existing drainage structures along the road sections under the study.

8.4.11.4.2 Condition Surveys for Bridges, Culverts and Structures

1. The Consultants shall thoroughly inspect the existing structures in the vicinity and shall prepare a report about their condition including all the parameters given in the Inspection pro-forma of IRC-SP; 35. The condition and structural assessment survey of the bridges / culverts / structures shall be carried out by senior experts of the Consultants.

2. For the bridges identified to be in a distressed condition based upon the visual condition survey, supplementary testing shall be carried out as per IRC-SP:35 and IRC-SP:40. Selection of tests may be made based on the specific requirement of the structure.

8.4.11.4.3 Geo-technical Investigations and Sub-Soil Exploration

1. The Consultants shall carry out geo-technical investigations and sub-surface explorations for the proposed Bridges / Road over bridges/ tunnels/ viaducts/ interchanges etc., along high embankments and any other location as necessary for proper design of the works and conduct all relevant laboratory and field tests on soil and rock samples. The minimum scope of geo-technical investigations for bridge and structures shall be as under:

S.N.	Description	Location of Boring
1	Overall length > 10	Each abutment and each pier locations.

2. The deviation(s), if any, by the Consultants from the scheme presented above should be got approved from CGRDC.

3. However, where a study of geo-technical reports and information available from adjacent crossings over the same waterway (existing highway and railway bridges) indicates that subsurface variability is such that boring at the suggested spacing will be insufficient to adequately define the conditions for design purposes, the Consultants shall review and finalise the bore hole locations in consultation with the CGRDC officers.

4. Geotechnical Investigations and Sub soil Exploration shall be carried out to determine the nature and properties of existing strata in bed, banks and approaches with trial pits and bore hole sections showing the levels, nature and properties of various strata to a sufficient depth below the level suitable for foundations, safe intensity of pressure on the foundation strata, proneness of site to artesian conditions, seismic disturbance and other engineering properties of soil etc. Geotechnical investigation and Sub-soil Exploration will be done as per IRC 78/(recent edition).

5. The scheme for the borings locations and the depth of boring shall be prepared by the Consultants and submitted to CGRDC for approval. These may be finalised in consultation with CGRDC.

6. The sub-soil exploration and testing should be carried out through the Geotechnical Consultants empanelled by MORT&H/PWD. The soil testing reports shall be in the format prescribed in relevant IRC Codes.

7. For the approach road pavement, bore holes at each major change in pavement condition or in deflection readings or at 2 km intervals whichever is less shall be

carried out to a depth of at least 2 m below embankment base or to rock level and are to be fully logged. Appropriate tests to be carried out on samples collected from these bore holes to determine the suitability of various materials for use in widening of embankments or in parts of new pavement structure.

8.4.11.5. Material Investigations

1. The Consultants shall identify sources (including use of fly-ash/ slag), quarry sites and borrow areas, undertake field and laboratory testing of the materials to determine their suitability for various components of the work and establish quality and quantity of various construction materials and recommend their use on the basis of techno-economic principles. The Consultants shall prepare mass haul diagram for haulage purposes giving quarry charts indicating the location of selected borrow areas, quarries and the respective estimated quantities.

   "Environment friendly materials"
   "As per MORTH circular No. RW /NH-33044/53/2013-S&R(R) dated 20th November, 2013, alternative pavement materials and technologies for road construction shall be assessed and compared in the design stage. The alternative resulting in substantial reduction in GHG emission and with least life cycle cost shall be recommended for implementation.

   Technical and economic feasibility of using industrial by products, recyclable and waste materials shall be assessed depending on their availability in the concerned region.

2. It is to be ensured that no material shall be used from the right-of-way except by way of levelling the ground as required from the construction point of view, or for landscaping and planting of trees etc. or from the cutting of existing ground for obtaining the required formation levels.

3. Environmental restrictions, if any, and feasibility of availability of these sites to prospective civil works contractors, should be duly taken into account while selecting new quarry locations.

4. The Consultants shall make suitable recommendations regarding making good the borrow and quarry areas after the exploitation of materials for construction of works.

5. The Material Investigation aspect shall include preparation and testing of bituminous mixes for various layers and concrete mixes of different design mix grades using suitable materials (binders, aggregates, sand filler etc.) as identified during Material Investigation to conform to latest MoRT&H specification.

8.4.12 Detailed Design of Road and Pavements, Bridges, Structures

8.4.12.1. General

1. The Consultants are to carryout detailed designs and prepare working drawings for the following:

   i. High speed access control Highway with divided carriageway configuration complete in all respects with service roads at appropriate locations;

   ii. design of pavement for the additional lanes and overlay for the existing road, paved shoulders, medians, verges;

   iii. bridges, viaduct/subways and other grade separated structures including

ROBs/RUBs etc.;

iv. at-grade and grade-separated intersections, connectors, interchanges (if required);

v. ROB for railway crossings as per the requirement and the standards of the Indian Railways; and,

vi. prepare alignment plans, longitudinal sections and cross-sections @ 50mintervals;

vii. designs for road furniture and road safety/traffic control features;

viii. designs and drawings for service road/under passes/overpass / cattle passes tree planting/fencing at locations where necessary / required

ix. Way side amenities like truck laybyes, bus bays and shelter, integrated traffic management system centers etc.

x short bypasses at congested locations

xi. drainage design showing location of turnouts, out falling structures, separate drawings sheet for each 5 km. stretch**.**

xii. bridges and structures rehabilitation plan with design and drawings

xiii. traffic amenities (Parking Areas, Weighing Station and Rest Areas, etc.).

xiv. In depth planning, design and drawing for Nodes.

xv. Complete planning, design and drawing for utility corridor.

xvi. Aircraft landing and takeoff sections.

xiv Design of pavement for approach road

xv Design of river bank protection / training works Innovative type of structures with minimum joints, aesthetically, pleasing and appropriate to the topography of the region shall be designed wherever feasible.

8.4.12.2. Design Standards

1. The Consultants shall evolve Design Standards and material specifications for the Study primarily based on IRC publications, MoRT&H Circulars and relevant recommendations of the international standards for approval by CGRDC.

2. The Design Standards evolved for the project shall cover all aspects of detailed design including the design of geometric elements, pavement design, bridges and structures, traffic safety and materials.

8.4.12.3. Geometric Design

1. The design of geometric elements shall, therefore, take into account the essential requirements of such facilities.

2. Based on the data collected from reconnaissance and topographic surveys, the sections with geometric deficiencies, if any, should be identified and suitable measures for improvement should be suggested for implementation.

3. The data on accident statistics should be compiled and reported showing accident type and frequency so that black spots are identified along the project road section. The possible causes (such as poor geometric features, pavement condition etc.) of accidents should be investigated into and suitable cost-effective remedial measures suggested for implementation.

4. The detailed design for geometric elements shall cover, but not be limited to the following major aspects:
   i. horizontal alignment;
   ii. longitudinal profile;
   iii. cross-sectional elements, including refuge lane (50m) at every 2kms.
   iv. junctions, intersections and interchanges;
   v. bypasses; and,
   vi. service roads as and when require i.e built up area..
5. The alignment design shall be verified for available sight distances as per the standard norms. The provision of appropriate markings and signs shall be made wherever the existing site conditions do not permit the adherence to the sight distance requirements as per the standard norms.
6. The consultants shall make detailed analysis of traffic flow and level of service for the existing road / road network and workout the traffic flow capacity for the improved project Highway. The analysis should clearly establish the widening (2/4-laning) requirements with respect to the different horizon periods taking into account special problems such as road segments with isolated steep gradients.
7. In the case of closely spaced cross roads the Consultant shall examine different options such as, providing grade separated structure for some of them with a view to reduce number of at-grade crossings, services roads connecting the cross-roads and closing access from some of the intersections and prepare and furnish appropriate proposals for this purpose keeping in view the cost of improvement, impact on traffic movement and accessibility to cross roads. The detailed drawings and cost estimate should include the provisions for realignments of the existing cross roads to allow such arrangements.
8. The Consultant shall also prepare design of grade separated pedestrian crossings (viaducts) for large cross traffic of pedestrians and / or animals.
9. The Consultant shall also prepare details for at-grade junctions, which may be adopted as alternative to the grade separated structures. The geometric design of interchanges shall take into account the site conditions, turning movement characteristics, level of service, overall economy and operational safety.
10. The Consultants shall prepare design and other details in respect of the parallel service roads in urbanized locations and other locations to cater to the local traffic, their effect of the viability of the project on commercial basis if service roads are constructed as part of the project and the implications of not providing the service roads.
11. The consultant shall prepare complete road and pavement design including drainage for new bypass option / connectors identified around congested town enroute.

8.4.12.4. Pavement Design

1. The detailed design of pavement shall involve:
   i. strengthening of existing road pavement and design of the new pavement if any, if the findings of the traffic studies and life-cycle costing analysis confirm the requirement for widening of the road beyond 2lane undivided carriageway standard;;

ii. pavement design for bypasses; and,
iii. design of shoulders.

2. The design of pavement shall primarily be based on IRC publications.

3. The design of pavement shall be rigorous and shall make use of the latest Indian and International practices. **The design alternatives shall include both rigid and flexible design options. The most appropriate design, option shall be established on construction cost, life-cycle costing and techno-economic consideration.**

4. For the design of pavement, each set of design input shall be decided on the basis of rigorous testing and evaluation of its suitability and relevance in respect of in service performance of the pavement. The design methodology shall accompany the design proposals and shall clearly bring out the basic assumptions, values of the various design inputs, rationale behind the selection of the design inputs and the criteria for checking and control during the implementation of works. In other words, the design of pavement structure should take due account of the type, characteristics of materials used in the respective courses, variability of their properties and also the reliability of traffic predictions. Furthermore, the methodology adopted for the design of pavement shall be complete with flowcharts indicating the various steps in the design process, their interaction with one another and the input parameter required at each step.

5. For the design of overlays for the existing pavement, the strengthening requirement shall duly take into account the strength of the existing pavement vis-à-vis the remaining life. The overlay thickness requirements shall be worked out for each road segment homogenous with respect to condition, strength and sub-grade characteristics. The rehabilitation provisions should also include the provision of regulating layer. For existing pavement with acceptable levels of cracking, provision of a crack inhibiting layer should also be included.

6. Latest techniques of pavement strengthening like provision of geo-synthetics and cold/hot pavement recycling should be duly considered by the consultant for achieving economy.

7. The paved shoulders shall be designed as integral part of the pavement for the main carriageway. The design requirements for the carriageway pavement shall, therefore, be applicable for the design of shoulder pavements. The design of granular shoulder should take into account the drainage considerations besides the structural requirements.

8. The pavement design task shall also cover working out the maintenance and strengthening requirements and periodicity and timing of such treatments.

8.4.12.5. Design of Embankments

1. The embankments design should provide for maximum utilization of locally available materials consistent with economy. Use of fly ash wherever available within economical leads must be considered. In accordance with Government instructions, **use of fly-ash within 100 km from Thermal Power Stations is mandatory.**

2. The Consultants shall carry out detailed analysis and design for all

embankments of height greater that 6 m based on relevant IRC publications.

3. *The design of embankments should include the requirements for protection works and traffic safety features.*

8.4.12.6. Design of Bridges, ROBs, Interchanges and Structures

1. The data collected and investigation results shall be analysis to determine the following :
   - i. HFL
   - ii. LWL
   - iii. LBL
   - iv. Erodibility of bed/scour level
   - v. Design discharge
   - vi. Linear waterway and effective linear waterway
   - vii. Likely foundation depth
   - viii. Safe bearing capacity
   - ix. Engineering properties of sub soil
   - x. Artesian conditions
   - xi. Settlement characteristics
   - xii. Vertical clearance
   - xiii. Horizontal clearance
   - xiv. Free board for approach road
   - xv. Severity of environment with reference to corrosion
   - xvi. Data pertaining to seismic and wind load
   - xvii. Requirement of model study etc.

2. The Consultant shall prepare General Arrangement Drawing (GAD) and Alignment Plan showing the salient features of the bridges, ROBs, Interchanges and structures proposed to be constructed / reconstructed along the road sections covered under the Study. These salient features such as alignment, overall length, span arrangement, cross section, deck level, founding level, type of bridge components (superstructure, substructure, foundations, bearings, expansion joint, return walls etc.) shall be finalized based upon hydraulic and geo-technical studies, cost effectiveness and ease of construction. The GAD shall be supplemented by Preliminary designs. In respect of span arrangement and type of bridge a few alternatives with cost-benefit implications should be submitted to enable CGRDC to approve the best alternative. The Consultant shall process and obtain approval to the GAD from Competent Authority. After approval of alignment and GAD the Consultant shall prepare detailed structural design as per IRC codes /guidelines and working drawings for all components of bridges and structures.

3. The location of all at-grade level crossings shall be identified falling across the existing level crossings for providing ROB at these locations. The Consultants shall prepare preliminary GAD for necessary construction separately to the Client. The Consultant shall pursue the Indian Railways Authorities or/and any statutory authority of State/Central Government for approval of the GAD from concerned Authorities.

4. GAD for bridges/structures across irrigation/water way channels shall be got approved from the concerned Irrigation/Water way Authorities/PWD/CGRDC. Subsequent to approval of GAD and alignment plan by CGRDC the Consultants shall prepare detailed structural design as per IRC codes/guidelines for all components of the bridges and structures.

5. Subsequent to the approval of the GAD and Alignment Plan by CGRDC and Railways, the Consultant shall prepare detailed structural design as per IRC and Railways guidelines and working drawings for all components of the bridges and structures. The Consultant shall furnish the design and working drawings for suitable protection works and/or river training works wherever required.

6. Dismantling/ reconstruction of existing structures shall be avoided as far as possible except where considered essential in view of their poor structural conditions/ inadequacy of the provisions etc.

7. The existing structures having inadequate carriageway width shall be widened/reconstructed in pat or fully as per the latest MoRT&H guidelines. The Consultant shall furnish the detailed design and working drawings for carrying out the above improvements.

8. Suitable repair / rehabilitation measures shall be suggested in respect of the existing structures as per IRC-SP:40 along with their specifications, drawings and cost estimate in the form of a report. The rehabilitation or reconstruction of the structures shall be suggested based on broad guidelines for rehabilitation and strengthening of existing bridges contained in IRC-SP:35 and IRC-SP:40.

9. Subsequent to the approval of the GAD and the alignment plan by CGRDC/Competent Authorities detailed design for all Civil Engineering structures shall also be carried out for the proposed underpasses, overpasses and interchanges.

10. The Consultants shall also carry out the design and make suitable recommendations for protection works for bridges and drainage structures.

11. In case land available is not adequate for embankment slope, suitable design for RCC retaining wall shall be furnished. However, RE walls may also be considered depending upon techno-economic suitability to be approved by CGRDC.

8.4.12.7. Arboriculture and Landscaping

The Consultants shall work out appropriate plan for planting of trees (specifying type of plantation), horticulture, floriculture on the surplus land of the right-of way with a view to beautify the highway and making the environment along the highway pleasing. The existing trees / plants shall be retained to the extent possible. The Transplantation of trees shall also be proposed wherever feasible.

8.4.12.8. Miscellaneous Works

1. The Consultants shall make suitable designs and layout for miscellaneous works including rest areas, bus bays, vehicle parking areas, telecommunication facilities etc. wherever appropriate.

2. The Consultants shall prepare the detailed scheme and lay out plan for the works mentioned in Para 1.

3. The Consultants shall prepare detailed plan for the traffic management and

safety during the construction period.

8.4.13 Environment and Social Impact Assessment

8.4.13.1 Reporting Requirements of EIA

The consultant would prepare the stand-alone reports as per the requirement of the ADB/JICA/World Bank / MORT&H/CGRDC, as applicable, with contents as per the following:

- Executive Summary
- Description of the Project
- Environmental setting of the project.
- Identification and categorization of the potential impacts (during pre-construction, construction and operation periods).
- Analysis of alternatives (this would include correlation amongst the finally selected alternative alignment/routing and designs with the avoidance and environmental management solutions).
- The public consultation process.
- Policy, legal and administrative framework. This would include mechanisms at the states and national level for operational policies. This would also include a description of the organizational and implementation mechanism recommended for this project.
- Typical plan or specific designs for all additional environmental items as described in the scope of work.
- Incorporating any other as per the suggestions of the ADB/JICA/World Bank / MORT&H/CGRDC, till the acceptance of the reports by the ADB/JICA/ World Bank / MORT&H/CGRDC, as applicable.
- EMP Reports for Contract Package based on uniform methodology and processes. The consultant will also ensure that the EMP has all the elements for it to be a legal document. The EMP reports would include the following:
    - Brief description of the project, purpose of the EMP, commitments on incorporating environmental considerations in the design, construction and operations phases of the project and institutional arrangements for implementing the EMP.
    - A detailed EMP for construction and operational phases with recourse to the mitigation measures for all adverse impacts.
    - Detailed plans for highway-side tree plantation (as part of the compensatory a forestation component).
    - Environmental enhancement measures would be incorporated. Enhancement measures would include items described in the scope of work and shall be complete with plans, designs, BOQ and technical specifications.
    - Environmental monitoring plans during and after construction including scaling and measurement techniques for the performance indicators selected for monitoring.
    - The EMP should be amendable to be included in the contract documents for the works.
    - Incorporating any other as per the suggestions of the ADB/JICA/ World

Bank MORT&H/CGRDC, till the acceptance of the reports by the ADB/JICA/ World Bank / MORT&H/CGRDC as applicable.

8.4.13.2 Reporting requirements of RAP

Analysis on the resettlement plan be conducted based on ADBs Hand Book on Resettlement, A Guide to Good practice 1998 as amended time to time/ World Bank Guidelines / Government of India Guidelines/ Government of Maharashtra Guidelines/ Guidelines of JICA, as applicable.

- Executive Summary
- Description of Project
- Objectives of the project.
- The need for Resettlement in the Project and evaluation of measures to minimize resettlement.
- Description and results of public consultation and plans for continued participation of PAPs.
- Definition of PAPs and the eligibility criteria.
- Census and survey results-number affected, how are they affected and what impacts will they experience.
- Legal and entitlement policy framework-support principles for different categories of impact.
- Arrangements for monitoring and evaluation (internal and external)
- Implementation schedule for resettlement which is linked to the civil works contract
- A matrix of scheduled activities linked to land acquisition procedures to indicate clearly what steps and actions will be taken at different stages and the time frame
- The payment of compensation and resettlement during the acquisition process
- An itemized budget (replacement value for all assets) and unit costs for different assets

8.5 Estimation of Quantities and Project Costs

1. The Consultants shall prepare detailed estimates for quantities (considering designs and mass haul diagram) and project cost for the entire project (civil packages wise), including the cost of environmental and social safeguards proposed based on MoRT&H Standard Data Book and market rate for the inputs. The estimation of quantities shall be based on detailed design of various components of the projects. The estimation of quantities and costs would have to be worked out separately for civil work Package as defined in this TOR / as finalized in consultation with CGRDC. These estimates shall be prepared as per regular formats of MoRT&H / PWD / CGRDC.
2. The Consultants shall make detailed analysis for computing the unit rates for the different items of works. The unit rate analysis shall duly take into account the various inputs and their basic rates, suggested location of plants and respective lead distances for mechanized construction. The unit rate for each item of works shall be

worked out in terms of manpower, machinery and materials.

3. The project cost estimates so prepared for MORT&H/CGRDC/ADB/ JICA/WB projects are to be checked against rates for similar on-going works in India under MORT&H/ World Bank/ ADB/JICA financed road sector projects.

4. Detailed breakup of project cost viz., Highway proper cost, type-wise cost of amenities, costing of utilities corridor, kilometer wise breakup of cost, cost of Nodal development etc. in consultation with CGRDC shall be furnished.

8.6 Viability and Financing Options

1. The Project Highway should be divided into the traffic homogenous links based on the findings of the traffic studies. The homogenous links of the Project Highway should be further subdivided into sections based on physical features of road and pavement, sub-grade and drainage characteristics etc. The economic and commercial analysis shall be carried out separately for each traffic homogenous links as well as for the Project Highway. Similarly the economic and commercial analysis shall be carried out for individually and collectively for all the Nodes as well as collectively along with the project Highway.

2. The values of input parameters and the rationale for their selection for the economic and commercial analyses shall be clearly brought out and got approved by CGRDC.

3. For models to be used for the economic and the commercial analyses, the calibration methodology and the basic parameters adapted to the local conditions shall be clearly brought out and got approved by MORT&H/CGRDC.

4. The economic and commercial analyses should bring out the priority of the different homogenous links as well as Nodes in terms of project implementation.

8.6.1. Economic Analysis

1. The Consultants shall carry out economic analysis for the project. The analysis should be for each of the sections covered under this TOR. The benefit and cost streams should be worked out for the project using HDM-IV or other internationally recognized life-cycle costing model.

2. The economic analysis shall cover but be not limited to be following aspects:

   i. quantify all economic benefits, including those from reduced congestion, travel distance, road maintenance cost savings and reduced incidence of road accidents; and,

   ii. estimate the economic internal rate of return (EIRR) for the project over a 30-year period. In calculating the EIRRs, identify the tradable and non-tradable components of projects costs and the border price value of the tradable components.

   iii. Saving in time value.

3. Economic Internal Rate of Return (EIRR) and Net Present Value (NPV), "with" and "without time and accident savings" should be worked out based on these cost-benefit stream. Furthermore, sensitivity of EIRR and NPV worked out for the different scenarios as given under:

   Scenario – I Base Costs and Base Benefits
   Scenario – II Base Costs plus 15% and Base Benefits
   Scenario – III Base Costs and Base Benefits minus 15%

Scenario – IV Base Costs plus 15% and Base Benefits minus 15%

The sensitivity scenarios given above are only indicative. The Consultants shall select the sensitivity scenarios taking into account possible construction delays, construction costs overrun, traffic volume, revenue shortfalls, operating costs, exchange rate variations, convertibility of foreign exchange, interest rate volatility, non-compliance or default by contractors, political risks and force majeure.

4. The economic analysis shall take into account all on-going and future road and transport infrastructure projects and future development plans in the project area.

8.6.2. Scope not exhaustive

The Scope of Services specified in this Clause 8.3.1 are not exhaustive and the Consultant shall undertake such other tasks as may be necessary to appraise the project feasibility, financially, prepare the feasibility report / DPR and successfully complete the proposal process for the Project.

8.7 Time period for the service

1. Time period envisaged for the study of the project is indicated in Enclosure-II, excluding the time taken by the Authority in providing the requisite documents or in conveying its comments on the Draft Reports. The final reports, drawings and documentation shall be completed within this time schedule. The Consultant shall deploy the Key Personnel as per the deployment of Personnel proposed.

2. CGRDC shall arrange to give approval on all sketches, drawings, reports and recommendations and other matters and proposals submitted for decision by the Consultant in such reasonable time so as not to delay or disrupt the performance of the Consultant's services.

8.8 Project Team and Project Office of the Consultant

1. The Consultants shall be required to form a multi-disciplinary team for this assignment. The consultants Team shall be manned by adequate number of experts with relevant experience in the execution of similar detailed design assignments.
2. List of suggested key personnel to be fielded by the consultant with appropriate man-month of consultancy services is given in Enclosure I as per clients assessment but not imited to.
3. A Manning Schedule for key personnel mentioned above is enclosed as Enclosure II along with broad job- description and qualification as.

8.9 Reports to be submitted by the Consultant to CGRDC

1. All reports, documents and drawings are to be submitted separately for each of the traffic homogenous link of the Project Road. The analysis of data and the design proposals shall be based on the data derived from the primary surveys and investigations carried out during the period of assignment. The sources of data and model relationships used in the reports shall be indicated with complete

details for easy reference.

2. Project preparation activities will be split into three stages as brought out below.

Stage 1: Inception Report & Quality Assurance Plan.
Stage 2: Strip Plan and Clearances
Stage 3: Preliminary Project Report (PPR)
Stage 4: Detailed Project Report (DPR)

3. Time schedule in respect of all such stages has been indicated in the next para. Consultant shall be required to complete, to the satisfaction of the Employer, all the different stages of study within the time frame indicated in the schedule of submission pertaining to Reports and Documents for becoming eligible for payment for any part of the next stage.

8.10 Reports and Documents to be submitted by the Consultant to CGRDC

1. The Consultant shall submit to the Employer the reports and documents in bound volumes (and not spiral binding form) after completion of each stage of work as per the schedule and in the number of copies as given in Enclosure III. Further, the reports shall also be submitted in floppy diskettes / CD's in addition to the hard copies as mentioned in Enclosure-III. Consultant shall submit all other reports mentioned specifically in the preceding paras of the TOR.
2. The time schedule for various submissions prescribed at S.No.1 above shall be strictly adhered to. No time-over- run in respect of these submissions will normally be permitted. Consultant is advised to go through the entire terms of reference carefully and plan his work method in such a manner that various activities followed by respective submissions as brought out at S.No.1 above are completed as stipulated. Consultant is, therefore, advised to deploy sufficient number of supporting personnel, both technical and administrative, to undertake the project preparation activities in each construction package (Section) simultaneously. The Consultant is also advised to start necessary survey works from the beginning so as to gain time in respect of various other activities in that stage.

STAGE 1

8.11 Quality Assurance Plan (QAP) Document

1. Immediately upon the award, the Consultants shall submit three copies of the QAP document covering all aspects of field studies, investigations design and economic analysis. The quality assurance plans/procedures for different field studies, engineering surveys and investigation, design and documentation activities should be presented as separate sections like engineering surveys and investigations, traffic surveys, material geo-technical and sub-soil investigations, road and pavement investigations, investigation and design of bridges & structures, economi analysis, drawings and documentation; preparation, checking, approval and filing of

calculations, identification and tractability of project documents etc. The field and design activities shall start after the QAP is approved by CGRDC.

2. The data formats proposed by the Consultants for use in field studies and investigations shall be submitted within 14 days after the commencement of services and got approved by CGRDC.

8.12 Inception Report (IR)

1. The report shall cover the following major aspects:
   i. Project appreciation;
   ii. Detailed methodology to meet the requirements of the TOR finalised in consultation with the CGRDC officers; including scheduling of various sub-activities to be carried out for completion of various stages of the work; stating out clearly their approach & methodology for project preparation after due inspection of the entire project stretch and collection/ collation of necessary information;
   iii. Task Assignment and Manning Schedule;
   iv. Work programme;
   v. Proforma for data collection;
   vi. Design standards and proposed cross-sections;
   vii. Key plan and Linear Plan;
   viii. Quality Assurance Plan (QAP) finalized in consultation with CGRDC;
   ix. Draft design standards; and

STAGE 2:

8.13 Strip Plan and Clearances

1. The Consultants shall submit the following documents:

   i. Details of the centre line of the existing/proposed Road along with the existing and proposed right-of- way limits to appreciate the requirements of land acquisition;
   ii. The information concerning the area including ownership of land to be acquired for the implementation of the project shall be collected from the revenue and other concerned authorities and presented along with the strip plans;
   iii. Strip plans showing the position of existing utilities and services indicating clearly the position of their relocation;
   iv. Separate strip plan showing shifting / relocation of each utility services in consultation with the concerned local authorities;

v. The utility relocation plans should clearly show existing right-of-way and pertinent topographic details including buildings, major trees, fences and other installations such as water-mains, telephone, telegraph and electricity poles, and suggest relocation of the services along with their crossings the highway at designated locations as required and prepare necessary details for submission to the Service Departments;

vi. Detail schedules for acquisition of additional land and additional properties in consultation with the revenue authorities; and

vii. Land Acquisition Plan.

2. The strip plans and land acquisition plan shall be prepared on the basis of data from reconnaissance and detailed topographic surveys.

3. The Report accompanying the strip plans should cover the essential aspects as given under:

   i. Kilometer-wise Land Acquisition Plan (LAP) and schedule of ownership thereof and Costs as per Revenue Authorities and also based on realistic rates.
   ii. Details of properties, such as buildings and structures falling within the right-of-way and costs of acquisition based on realistic rates.
   iii. Kilometer-wise Utility Relocation Plan (URP) and costs for relocation of civil construction package as per concerned authorities.
   iv. Kilometer-wise account in regard to felling of trees of different type and girth and value estimate of such trees based on realistic rates obtainable from concerned District forest office.

4. The strip plans shall clearly indicate the scheme for widening. The views and suggestions of the CGRDC/State PWD should be duly taken into account while working out the widening scheme (left, right or symmetrical). The widening scheme shall be finalised in consultation with CGRDC.

5. Kilometer-wise Strip Plans for each section (Package) shall be prepared separately for each concerned agency and suggested by CGRDC.

8.14 Land Acquisition Report

1. The Land acquisition report shall be prepared and submitted separately. The report shall include detail schedules about acquisition of land holdings as per revenue records and their locations in a strip plan and also the costs as per district authorities. Details shall be submitted in land acquisition Performa to be supplied by LAO. The land acquisition report shall be submitted in both Hindi and English languages.

2. The land acquisition report should be prepared in consultation with affected persons, non-governmental organizations and concerned government agencies and should cover land acquisition plan and cost. It should also include plan of compensating afforestation, its land requirement with specific locations and cost involved for

undertaking all activities in this regard.

8.14.1 Preparation of village wise land plan schedules as per revenue records and requirement for taking up land acquisition for the project including land requirement for ROW, way side amenities etc. land for commercial development and lad requirement for Nodes shall be an important part of the services. These schedules shall be prepared on the basis of revenue village maps and shall include the details of survey numbers (name of land owner / organization & land to be acquired from these survey numbers coming under coming under acquisition).

Consultant shall come up with location wise various suitable land acquisition models with their due comparisons and recommendation separately for Highway and Nodes. After approval of location wise land acquisition model by CGRDC, the Consultant shall proceed with initial stages of implementation of land acquisition viz., marking land plans on duly certified village maps showing khasra numbers, preparation of detailed schedules in respect of the proposed acquisition of land holdings as per revenue records, their locations in a strip plan and the costs as per district authorities in a format that would enable to initiate land acquisition proceedings including physical demarcation of all above mentioned land parcel on ground, submission & approval of land acquisition proposals to revenue/concerned authorities. The land acquisition report shall be submitted in both Hindi and English languages. The Consultant shall facilitate issuance of land acquisition notices to fulfill all the legal formalities required prior to physical land acquisition.

8.14.2 The land acquisition report should be prepared in consultation with affected persons, non-governmental organizations and concerned government agencies and should cover land acquisition and resettlement plan and costs of resettlement and rehabilitation of such affected persons. It should also include plan of compensating afforestation, its land requirement with specific locations and cost involved for undertaking all activities in this regard.

It is also planned to declare CGRDC as Special Planning Authority (SPA) for land parcel along the approved alignment. In this regards, the Consultant shall procure and submit the village wise land plans for the strip of 5 kilometer on either side of approved alignment from the edge of ROW along with Village, Taluka & District wise area statement for throughout the alignment.

The Consultant should handover all land acquisition records & documents and actual site demarcation of land to CGRDC/civil contractor. Furthermore, the civil contractor will continue the land acquisition process and act as a L.A. authority on behalf of CGRDC. The civil contractor will carry out subsequent land acquisition process and render his services till the acquired land will be transferred in the name of CGRDC on revenue records. The Consultant shall also process for advance possession of land from land owners on negotiations as per prevailing revenue norms, amendments, rules and regulations (as per directives from CGRDC), as the case may be.

STAGE: 3

8.15 Preliminary Project Report- PPR

The Draft PPR shall be prepared separately for each construction package and shall contain the following:

Volume – I: Preliminary Design Report

- Executive summary
- Project description
- Updated cost estimates
- Updated economic analyses
- Suggested methods of procurement and packaging
- Conclusions and recommendations

Volume – II: Design Report

- Road and bridge inventory
- Summary of survey and investigations data
- Proposed design basis, standards and specifications
- Proposed pavement design and preliminary bridge designs

Volume – III: Drawings

- Location map
- Layout plans
- Typical cross sections showing pavement details
- Drawings for cross-drainage and other structures
- Road junction designs
- Indicative land acquisition plans

8.16 Draft Detailed Project Report (DPR)

1. The draft DPR Submission shall consist of Main Report, Design Report, Materials Report, Engineering Report, Drainage Design Report, Economic Analysis Report.

2. The Report volumes shall be submitted as tabulated in Enclosure-III.

3. The Documents and Drawings shall be submitted for each section (Package) and shall be in the following format:

Reports

i. **Volume-I, Main Report:** This report will present the project background, details of surveys and investigations carried out, analysis and interpretation of survey and investigation data, traffic studies and demand forecasts, designs, cost estimation, economic and commercial analyses and conclusions. The report shall include Executive Summary giving brief accounts of the findings of the study and recommendations.

The Report shall also include maps, charts and diagrams showing locations and details of existing features and the essential features of improvement and upgrading.The basic data obtained from the field studies and investigations and input data used for the preliminary design shall be submitted in a separate volume as an Appendix to Main Report.

ii. **Volume - II, Design Report:** This volume shall contain design calculations, supported by computer printout of calculations wherever applicable. The Report shall clearly bring out the various features of design standards adopted for the study. The design report will be in two parts. Part- I shall primarily deal wit the design of road features and pavement composition while Part-II shall deal with the design of bridges and cross-drainage structures. The sub- soil exploration report including the complete details of boring done, analyses and interpretation of data and the selection of design parameters shall be included as an Appendix to the Design Report. The detailed design for all features should be carried out as per the requirements of the Design Standards for the project. However, there may be situations wherein it has not been possible to strictly adhere to the design standards due to the existing site conditions, restrictions and other considerations. The report should clearly bring out the details of these aspect and the standards adopted.

iii. **Volume - III, Materials Report:** The Materials Report shall contain details concerning the proposed borrows areas and quarries for construction materials and possible sources of water for construction purposes. The report shall include details on locations of borrow areas and quarries shown on maps and charts and also the estimated quantities with mass haul diagram including possible end use with leads involved, the details of sampling and testing carried out and results in the form of important index values with possible end use thereof.

The materials Report shall also include details of sampling, testing and test results obtained in respect physical properties of sub-grade soils. The information shall be presented in tabular as well as in graphical representations and schematic diagrams. The Report shall present soil profiles along the alignment.

The material Report should also clearly indicate the locations of areas with problematic soils. Recommendations concerning the improvement of such soils for use in the proposed construction works, such as stabilization (cement, lime, mechanical) should be included in the Report.

iv. **Volume - IV,** Environmental Assessment Report including Environmental Management Plan (EMP) & Resettlement Action Plan (RAP): The Report shall be prepared conforming to the Guidelines of the Government of India, State Government and World Bank / ADB as appropriate for construction package.

v. **Volume - V, Technical Specifications:** The MORT&H's Technical Specifications for Road and Bridge works shall be followed for this study. However, Volume - IV: Technical Specifications shall contain the special technical specifications which are not covered by MOST Specifications for Roads and Bridges (latest edition/revision) and also specific quality control norms for the construction of works.

vi. **Volume- VI, Rate Analysis:** This volume will present the analysis of rates for all items of works. The details of unit rate of materials at source, carriage charges, any other applicable charges, labour rates, machine charges as considered in arriving at unit rates will be included in this volume.

vii. **Volume- VII, Cost Estimates :** This volume will present the cost of each item of work as well as a summary of total cost.

viii. **Volume- VIII, Bill of Quantities:** This volume shall contain the detailed Bill of Quantities for all items of works.

ix. **Volume- IX**, **Drawing Volume** : All drawings forming part of this volume shall be 'good for construction' drawings. All plan and profile drawings will be prepared in scale 1:250V and 1:2500H scale to cover one km in one sheet. In addition this volume will contain 'good for construction' drawings for the following:

a. Horizontal Alignment and Longitudinal Profile.
b. Cross-section @ 50m interval along the alignment within ROW
c. Typical Cross-Sections with details of pavement structure.
d. Detailed Working Drawings for individual Culverts and Cross-Drainage Structures.
e. Detailed Working Drawings for individual Bridges and Structures.
f. Detailed Drawings for Improvement of At-Grade Intersections.
g. Schematic Diagrams (linear chart) indicating but be not limited to be following:

    i. Widening scheme;
    ii. location of traffic signals, traffic signs, road markings, safety features; and,

All drawings will be prepared in A2 size sheets. The format for plan, cross-section and profile drawings shall be finalised in consultation with the concerned CGRDC officers. The drawings shall also include details of all BM and reference pillars, HIP and VIP. The co-ordinates of all points should be referenced to a common datum, preferably, GTS referencing system. The drawings shall also include the locations of all traffic safety features including traffic signals, signs, markings, and delineators. The typical cross-section drawings should indicate the scheme for future widening of the carriageway.

x. **Volume-XI, Project Clearances** – All the necessary(project related) clearances (such as from MOEF, Water Resources Deptt. and any other concerned agencies) shall be obtained by the consultant and submitted to CGRDC so that project implementation can straight away proceed without any hold up.

STAGE : 4

8.17 Final Detailed Project Report, Documents and Drawings (6 Sets)

The Final DPR consisting of Main Report, Design Report, Drainage Design Report and Materials Report, incorporating all revisions deemed relevant following receipt of the comments from CGRDC on the draft DPR shall be submitted as per the schedule given in Enclosure- III.

8.18 Interaction with CGRDC

1. During entire period of services, the Consultant shall interact continuously with CGRDC and provide any clarification as regards methods being followed and carry out modification as suggested by CGRDC. A programme of various activities shall be provided to CGRDC and prior intimation shall be given to CGRDC regarding start of key activities such as boring, survey etc. so that inspections of CGRDC officials could be arranged in time.
2. The CGRDC officers and other Government officers may visit the site at any time, individually or collectively to acquaint themselves with the field investigation and survey works.
3. The consultant shall be required to send 3 copies of concise monthly Progress Report by the 5th day of the following month to the designated officer at his Head Quarter so that progress could be monitored by the CGRDC. These reports will indicate the dates of induction and de-induction of various key personnel and the activities performed by them. Frequent meetings with the consultant at site office or in CGRDC office at Raipur are foreseen during the currency of project preparation.
4. All equipment, software and books etc. required for satisfactory services for this project shall be obtained by the Consultant at their own cost and shall be their property.
5. The Authority may review with the Consultant, any or all of the documents and advice forming part of the Consultancy, in meetings and conferences which will be held in Raipur at the Authority's office. Further, the Consultant may be required to attend meetings and conferences with pre-qualified applicants or the Selected Applicant.
6. The Authority may, in its discretion, require the Consultant to participate in extended meetings and/ or work from the offices of the Authority and the Consultant shall, on a best endeavour basis and without unreasonable delay, provide such services at the offices of the Authority

8.19 CONSULTANCY TEAM

The Consultant shall form a team (the "Consultancy Team") for undertaking this assignment. The Consultancy Team shall consist of experts who have the requisite

qualifications and experience. Team Leader shall be the leader of the Consultancy Team. The Key Personnel would be considered for evaluation of the Technical Proposal. Other expertise as required for the services to be rendered by the Consultant shall be included in the Team either through the Key Personnel or through other Professional Personnel, as necessary.

8.19.1 Consultant shall mobilise and demobilise its Professional Personnel and Support Personnel with the concurrence of the Authority and shall maintain the time sheet/ attendance sheet of the working of all Personnel in the Project Office.

8.19.2 The Consultant shall establish a Project Office at a suitable location in Raipur for efficient and coordinated performance of its Services. All the Key Personnel shall be deployed at this office.

8.20 REPORTING

8.20.1 The Consultant shall electronically and by mail, submit fortnightly time reports of each of the Key Personnel. Such time reports shall be submitted to the Authority on the 15th and the last day of each calendar month by end of the business day and shall include the number of hours expended on the Project by the Consultant on each working day of the fortnight covered by the time report. The time reports shall also include a brief description of work performed during that fortnight by each of the Key Personnel.

8.20.2 The Consultant will work closely with the Authority. The Authority will establish a Working Group (the "WG") to enable conduct of this assignment. A designated Project Director of the Authority will be responsible for the overall coordination and project development. He will play a coordinating role in dissemination of the Consultant's outputs, facilitating discussions, and ensuring required reactions and responses to the Consultant.

8.20.3 The Consultant may prepare Issue Papers highlighting issues that could become critical for the timely completion of the Project and that require attention from the Authority.

8.20.4 The Consultant will make a presentation on the inception report for discussion with the WG at a meeting. This will be a working document. The Consultant is required to prepare and submit a monthly report that includes and describes, inter alia, general progress to date; data and reports obtained and reviewed, conclusions to date, if any; concerns about availability of, or access to, data, analyses, reports; questions regarding the TOR or any other matters regarding work scope and related issues; and so on. The Consultant's work on the TOR tasks should continue while the report is under consideration and is being discussed.

8.20.5 Regular communication with the WG and the Project Director is required in addition to all key communications. This may take the form of telephone/ teleconferencing, emails, faxes, and occasional meetings.

8.20.6 The Deliverables will be submitted as per schedule provided in this RFP.

8.21 DOCUMENTS TO BE MADE AVAILABLE BY THE AUTHORITY

8.21.1 Available data as may be required by the Consultant will be provided by the Authority on request. The Nodal Officer designated by the Authority shall facilitate handing over of such information to the Consultant.

8.22 COMPLETION OF SERVICES

8.22.1 All the Deliverables shall be compiled, classified and submitted by the Consultant to the Authority in soft form, to the extent possible. The documents comprising the Deliverables shall remain the property of the Authority and shall not be used by the Consultant for any purpose other than that intended under these Terms of Reference without the permission of the Authority. The Consultancy shall stand completed on acceptance by the Authority of all the Deliverables of the Consultant.

Schedule for Submission of Reports and Documents

Key Date No.	Description of Deliverables	Time Period in Days from date of Commencement	No. of Copies
	Fortnight Reports	1st and 3rd Monday of Every Month	3
KD1	Inception Report including QAP document	10	6
KD2	Strip Plan	30	6
KD3	Draft DPR	45	6
KD4	Detailed Project Report (DPR) and project clearances	60	6

Enclosure-I

MANNING SCHEDULE

Sr. No.	Key Personnel	No.	Months
1.	Team Leader Cum Senior Highway Engineer	1	02
2.	Bridge/Structural Engineer	1	1.5
3.	Pavement Design / Traffic Engineer	1	1.5
4.	Senior Survey Engineer	1	1.5
5.	Quantity Surveyor/Documentation Expert	1	1.5
6.	Material Engineer cum Geotechnical Engineer / Expert	1	1.5
7.	Environmental and Social R & R Expert	1	1.5
8.	Land Assessment Expert	1	1.5

Enclosure-II

QUALIFICATION AND EXPERIENCE REQUIREMENT OF KEY PERSONNEL

1. Team Leader cum Senior Highway Engineer

i)	**Educational Qualification**	
	Essential	Post Graduate in Highway Engineering
	Desirable	Ph.D in Highway Engineering
ii)	**Essential Experience**	
	a)Total Professional Experience	Min. 20 years
	b) Experience in Highway projects	Min. 15 years in Planning, project preparation and design of **Highway projects**, including 4/6 laning of NH/SH.
	c) Experience in similar capacity	Should have worked as Team Leader for at least one project in preparation of DPR / Feasibility or Construction Supervision of Four/Six laning works and of Four/ six laning of highway projects(NH/SH).
iii)	**Age Limit**	60 years on the date of submission of proposal

QUALIFICATION AND EXPERIENCE REQUIREMENT OF KEY PERSONNEL

2. Bridge/Structural Design Engineer

i)	**Educational Qualification** Essential	Post Graduate in Civil Engineering (Bridge Engineering / Structure Engineering)
	Desirable	Ph.D in Civil Engineering (Bridge Engineering / Structure Engineering)
ii)	**Essential Experience**	
	a)Total Professional Experience b) Experience in Bridge projects c) Experience in similar capacity	Min. 15 years Min. 10 years in project preparation and design of bridge projects. Bridge Engineer in highway design consultancy projects (4/6 lane NH/SH)involving design of **major bridge** (length more than 100 m)
iii)	**Age Limit**	60 years on the date of submission of Proposal

Enclosure-II

QUALIFICATION AND EXPERIENCE REQUIREMENT OF KEY PERSONNEL

3. Pavement Design / Traffic Engineer

i)	**Educational Qualification** Essential	 Post Graduate in Civil Engineering (Highway Engineering / Transportation Engineering)
ii)	Desirable **Experience** a)Total Professional Experience b) Experience in Highway projects c) Experience in similar capacity	Ph.D in Civil Engineering (Highway Engineering / Transportation Engineering) Min. 15 years Minimum 10 years experience in pavement design and traffic studies Pavement design and traffic studies of highway projects (4/6 lane NH/SH)
iii)	**Age Limit**	60 years on the date of submission of Proposal

QUALIFICATION AND EXPERIENCE REQUIREMENT OF KEY PERSONNEL

4. Senior Survey Engineer

i)	**Educational Qualification**	
	Essential	Graduate or equivalent in Civil Engineering
ii)	Desirable **Essential Experience**	Post Graduate in Survey Engineering/ Surveying / Remote Sensing
	a) Total Professional Experience b) Experience in Highway projects	Min. 10 years Min. 5 years on project preparation and/or construction with thorough understanding of modern computer based methods of surveying
iii)	c) Experience in similar capacity **Age Limit**	Survey Engineer for projects preparation of highway project (NH/SH) 60 years on the date of submission of Proposal

Enclosure-II

QUALIFICATION AND EXPERIENCE REQUIREMENT OF KEY PERSONNEL

5. Quantity Surveyor / Documentation Expert

i)	**Educational Qualification** Essential Desirable	Graduate or equivalent in Civil Engineering / Post Graduate in Quantity Surveying / Estimating and Costing.
ii)	**Essential Experience**	
	a) Total Professional Experience	Min. 10 years
	b) Experience in Highway Projects	Min. 5 years in Preparation of Bill of Quantities, Contract documents etc. for highway projects involving two/ four laning
	c) Experience in similar capacity	Quantity Surveyor / Documentation Expert in highway projects(NH/SH/Highways)involving four/six laning
iii)	**Age Limit**	60 years on the date of submission of proposal

Enclosure-II

QUALIFICATION AND EXPERIENCE REQUIREMENT OF KEY PERSONNEL

6. Material Engineer cum Geotechnical Engineer / Expert

i)	**Educational Qualification**	
	Essential	Graduate in Civil Engineering or M.Sc. Geology
	Desirable	Post Graduate in Foundation Engineering / Soil Mechanics / Geology /Geo Tech Engineering
ii)	**Essential Experience** a) Total Professional Experience b) Experience in Highway Projects	Min. 10 years Min. 5 years on road projects in design and/or construction
	c) Experience in similar capacity	Material cum Geo-technical Engineer on highway projects (4/6 lane)
iii)	**Age Limit**	60 years on the date of submission of Proposal

Enclosure-II

QUALIFICATION AND EXPERIENCE REQUIREMENT OF KEY PERSONNEL

7. Environmental Expert and Social R&R Expert

i)	**Educational Qualification**	
	Essential	Graduate in Civil Engineering / Environment Engineering / Masters in Environment Science
	Desirable	Post Graduate in Environmental Engineering
ii)	**Essential Experience**	
	a) Total Professional Experience	Min. 10 years
	b) Experience in Road Projects	Should have min. 5 years' experience in preparation of environment impact assessment
	c) Experience in similar capacity	Should have worked as an Environmental Expert in highway projects (4/6 laning)
iii)	**Age Limit**	60 years on the date of submission of proposal

Enclosure-II

QUALIFICATION AND EXPERIENCE REQUIREMENT OF KEY PERSONNEL

8. Land Assessment Expert

i)	**Educational Qualification**	
	Essential	Retired Land Acquisition Officer from Revenue Department in Chhattisgarh.
	Desirable	Graduation
ii)	**Essential Experience**	
	a) Total Professional Experience	Min. 10 years
	a) Experience in Major Projects b) Experience in similar capacity	Should have minimum 5 years experience in handling land acquisition processes & similar activities He should have handled land acquisition cases, all proceeding till awards and compensation & similar activities
iii)	**Age Limit**	60 years on the date of submission of proposal

TERMS OF REFERENCE FOR PART-2

(PROJECT MANAGEMENT CONSULTANCY WORKS)

Project Management Consultancy (PMC) for Supervision of Construction of road/expressway with BRTS Corridor on existing Fafadih-Telibandha-Naya Raipur Narrow Gauge railway Track:

[Note: The term "Agreement" and clauses thereof refer to the Contract / Concession Agreement or any other agreement to be entered into between Authority and ----------(the Contractor / Concessionaire) for the work of Construction / Development of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track.

1. Scope

1.1 These Terms of Reference (the "**TOR"**) for the Project Management Consultant are being specified in advance before entering into Agreement (the "**Agreement**") between the Authority and ..... (the "Contractor / Concessionaire") for the Project of Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track, and a copy of which will be provided before the start of the Project Management Consultancy assignment and will for part of the TOR.

1.2 The TOR shall apply to construction of the Project Road.

2. Definitions and interpretation

2.1 The words and expressions beginning with or in capital letters and not defined herein but defined in the Agreement shall have, unless repugnant to the context, the meaning respectively assigned to them in the Agreement.

2.2 References to Articles, Clauses and Schedules in this TOR shall, except where the context otherwise requires, be deemed to be reference to the Articles, Clauses and Schedules of the Agreement, and references to Paragraphs shall be deemed to be references to Paragraphs of this TOR.

2.3 The rules of interpretation to be stated in the Agreement shall apply, *mutatis mutandis*, to this TOR.

3. Role and Function of the Project Management Consultant

3.1 The Project Management Consultant shall discharge its duties in a fair, impartial and efficient manner, consistent with the highest standards of professional integrity and Good Industry Practice.

3.2 The Project Management Consultant shall perform the duties and exercise the authority in accordance with the provisions of this Agreement, but subject to obtaining prior written approval of the Authority before determining.

(a) any Time Extension.

(b) Any additional cost to be paid by the Authority to the Contractor;
(c) The Termination Payment; or
(d) Any other matter which is not specified in (a), (b) or (c) above and which creates an obligation or liability on either Party.

3.3 The Project Management Consultant shall submit regular periodic reports, at least once every month, to the Authority in respect of its duties and functions under this Agreement. Such reports shall be submitted by the Project Management Consultant within 10 (ten) days of the beginning of every month.

3.4 The Project Management Consultant shall inform the Contractor of any delegation of its duties and responsibilities to its suitably qualified and experienced personnel; provided, however, that it shall not delegate the authority to refer any matter for the Authority's prior approval in accordance with the provisions of the Agreement.

3.5 The Project Management Consultant shall aid and advise the Authority on any proposal for Change of Scope

3.6 In the event of any disagreement between the Parties regarding the meaning, scope and nature of Good Industry Practice, as set forth in any provision of the Agreement, the Project Management Consultant shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature.

4. Construction Period

4.1 During the Construction Period, the Project Management Consultant shall review the Drawings furnished by the Contractor along with supporting data, including the geo-technical and hydrological investigations, characteristics of materials from borrow areas and quarry sites, topographical surveys, and the recommendations of the Safety Consultant in accordance with the provisions of Agreement. The Project Management Consultant shall complete such review and send its observations to the Authority and the Contractor within 15 (fifteen) days of receipt of such Drawings; provided, however that in case of a Major Bridge or Structure, the aforesaid period of 15 (fifteen) days may be extended upto 30 (thirty) days. In particular, such comments shall specify the conformity or otherwise of such Drawings with the Scope of the Project and Specifications and Standards.

4.2 The Project Management Consultant shall review any revised Drawings sent to it by the Contractor and furnish its comments within 10 (ten) days of receiving such Drawings. The review of drawing should be authenticated by Project Management Consultant.

4.3 The Project Management Consultant shall review the Quality Assurance Plan submitted by the Contractor and shall convey its comments to the Contractor within a period of 21 (twenty- one) days stating the modifications, if any, required thereto.

4.4 The Project Management Consultant shall complete the review of the methodology proposed to be adopted by the Contractor for executing the Works, and convey its comments to the Contractor within a period of 10 (ten) days from the date of receipt of the proposed

methodology from the Contractor.

4.5 The Project Management Consultant shall grant written approval to the Contractor, where necessary, for interruption and diversion of the flow of traffic in the existing lane(s) of the Project Highway for purposes of maintenance during the Construction Period in accordance with the provisions of the Agreement.

4.6 The Project Management Consultant shall review the monthly progress report furnished by the Contractor and send its comments thereon to the Authority and the contractor within 7 (seven) days of receipt of such report.

4.7 The Project Management Consultant shall inspect the Construction Works regularly and the Project Highway and shall submit a weekly Inspection Report bringing out the results of inspections and the remedial action taken by the Contractor in respect of Defects or deficiencies. In particular, the Project Management Consultant shall include in its Inspection Report, the compliance of the recommendations made by the Safety Consultant.

4.8 The Project Management Consultant shall conduct the pre-construction review of manufacturer's reports and standard samples of manufactured Materials, and such other Materials as the Project Management Consultant may require.

4.9 For determining that the Works conform to Specifications and Standards, the Project Management Consultant shall require the Contractor to carry out, or cause to be carried out, tests at such time and frequency and in such manner as specified in the Agreement and in accordance with Good Industry Practice for quality assurance, the tests specified in the IRC Special Publication-11 (Handbook of Quality Control for Construction of Roads and Runways) and the Specifications for Road and Bridge Works issued by MORT&H (the "Quality Control Manuals") or any modifications/substitution thereof shall be deemed to be tests conforming to Good Industry Practice for quality assurance.

4.10 The Project Management Consultant shall certify all the tests conducted by the concessionaire as per the clause 1.18

4.11 The schedule of tests shall be as per IRC/MoRTH guidelines and the criteria for acceptance/rejection of their results shall be determined by the Project Management Consultant in consultation of the authority and in accordance with the Quality Control Manuals.

4.12 In the event that results of any tests conducted, establish any Defects or deficiencies in the Works, the Project Management Consultant shall require to instruct the Contractor accordingly to carry out remedial measures.

4.13 The Project Management Consultant may instruct the Contractor to execute any work which is urgently required for the safety of the Project Highway, whether because of an accident, unforeseeable event or otherwise; provided that in case of any work required on account of a Force Majeure Event, the provisions of the Agreement shall apply.

4.14 In the event that the Contractor fails to achieve any of the Project Milestones, the Project Management Consultant shall undertake a review of the progress of construction and identify potential delays, if any. If the Project Management Consultant shall determine that completion of the Project Highway is not feasible within the time specified in the Agreement,

it shall require the Contractor to indicate within 15 (fifteen) days the steps proposed to be take to expedite progress, and the period within which the Project Completion Date shall be achieved. Upon receipt of a report from the Contractor, the Project Management Consultant shall review the same and send its comments to the Authority and the Contractor forthwith.

4.15 The Project Management Consultant shall obtain from the Contractor a copy of all the Contractor's quality control records and documents before the Completion Certificate is issued pursuant to the Agreement.

4.16 Project Management Consultant may recommend to the Authority suspension of the whole or part of the Works if the work threatens the safety of the Users and pedestrians. After the Contractor has carried out remedial measure, the Project Management Consultant shall inspect such remedial measures forthwith and make a report to the Authority recommending whether or not the suspension hereunder may be revoked.

4.17 In the event that the Contractor carries out any remedial measures to secure the safety of suspended works and users, and requires the Project Management Consultant to inspect such work .The Project Management Consultant shall inspect the suspended works within 3 (three) days of receiving such notice, and make a report to the Authority forthwith, recommending whether or not such suspension may be revoked by the Authority.

4.18 The Project Management Consultant shall carry out, or cause to be carried out, all the Tests to be specified in Schedule to the Agreement and issue a Completion Certificate or Provisional Certificate after prior approval of the Authority as the case may be. For carrying out is functions as per the Agreement and all matters incidental thereto, the Project Management Consultant shall act under and in accordance with the provisions of the Agreement.

5. Maintenance Period

DELETED

6. Payments

6.1 The Project Management Consultant shall withhold payments for the affected works for which the Contractor fails to revise and resubmit the Drawings to the Project Management Consultant in accordance with the provision of the Agreement.

6.2 Project Management Consultant shall

a) within 10 (ten) days of receipt of the Stage Payment Statement from the Contractor pursuant to the relevant provision in the Agreement, determine the amount due to the Contractor and recommend the release of 100(Hundred) percent of the amount so determined as part payment, pending issue of the Interim Payment Certificate; and

b) within 15 (fifteen) days of the receipt of the Stage Payment Statement referred in the Agreement, deliver to the Authority and the Contractor an Interim Payment Certificate certifying the amount due and payable to the Contractor, after adjustments in accordance with the provisions of the Agreement.

6.3 The Project Management Consultant shall certify final payment with 30 (thirty) days of the

receipt of the final payment statement in accordance with the provisions of the Agreement.

7. Other duties and functions

The Project Management Consultant shall perform all other duties and functions as specified in the Agreement.

8. Miscellaneous

8.1 A copy of all communications, comments, instructions, Drawings or Documents sent by the Project Management Consultant to the Contractor pursuant to this TOR, and a copy of all the test results with comments of the Project Management Consultant thereon, shall be furnished by the Project Management Consultant to the Authority forthwith.

8.2 The Project Management Consultant shall retain at least one copy each of all Drawings and Documents received by it, including 'as – built' Drawings and keep them in its safe custody.

8.3 Within 30 (Thirty) days of the Project Completion Date, the Project Management Consultant shall obtain a complete set of as built Drawings in 2 (two) hard copies and in micro film form or in such other medium as may be acceptable to the Authority, reflecting the Project Highway as actually designed, engineered and constructed, including an as-built survey illustrating the layout of the Project Highway and setback lines, if any, of the buildings and structures forming part of project Facilities; and shall hand them over to the Authority against receipt thereof.

8.4 The Project Management Consultant, if called upon by the Authority or the Contractor or both, shall mediate and assist the Parties in arriving at an amicable settlement of any Dispute between the Parties.

8.5 The Project Management Consultant shall inform the Authority and the Contractor of any event of Contractor's Default within one week of its occurrence.

9. PERFORMANCE CLAUSE

Project Management Consultant shall be expected to fully comply with all the provisions of the `Terms of Reference', and shall be fully responsible for supervising the Designs, Construction and maintenance and operation of the facility takes place in accordance with the provisions of the Agreement and other schedules. Any failure of the Project Management Consultant in notifying to Employer and the Contractor on non-compliance of the provisions of the Agreement and other schedules by the Contractor, non-adherence to the provision of TOR and non- adherence to the time schedule prescribed under TOR shall amount to non- performance.

The Project Management Consultant shall appoint its authorized representative, who shall issue on behalf of the Project Management Consultant, the Provisional Completion Certification and Completion Certificate along with the Team Leader and shall carry out any such task as may be decided by Authority. The Project Management Consultant shall

take prior approval of Authority before issuing Provisional Completion Certification and Completion Certificate. The proposal submitted shall also include the name of the authorized representative along with the authorization letter and power of attorney.

10. CONSULTANT'S PROPOSAL

10.1 List of key personnel to be fielded by the Consultants shall be as below:

i. Team Leader Cum Senior Highway Engineer
ii. Pavement Engineer
iii. Senior Quality cum Material Engineer
iv. Bridge / Structural Engineer
v. Senior Quantity Surveyor
vi. Senior Contract Specialist
vii. CAD Expert

10.2 Broad job-description and minimum qualification for key personnel mentioned above is enclosed as **Enclosure–B**. However, higher marks shall be accorded to the Candidate with higher relevant qualification and experience. The Consultant should feel free to submit their proposal on the basis of the man-months given in the document. All the CV's of the personals mentioned in the Data Sheet shall be evaluated at the time of evaluation of technical proposal. The **age of the Key Personnel should not be more than 60 years on the date of submission of proposal.** Consultants are advised in their own interest to frame the technical proposal in an objective manner as far as possible so that these could be properly assessed in respect of points to be given as part of evaluation criteria. The bio-data of the key personnel should be signed on every sheet by the personnel concerned and the last sheet of each bio-data should also be signed by the authorised signatory for the Consultant. The key personnel shall also certify at the end of their bio-data proforma that they have not left any of the Authority's / Govt. Of CG works without completing of their assignment and have not accepted any other offer at the time of signing of the bio-data and as such shall be available to work with the Authority Engineer, if the Project is awarded. In case the key personnel leaves the assignment without approval of the Authority, the Authority would be at liberty to take any appropriate action against that key personnel including debarment. The CV submitted by selected firm shall be hoisted on official website of Authority.

11.3 In addition to above, consultants are required to propose other key personnel, sub-professional staff and other field engineers as detailed in **Enclosure-A** and the minimum qualification requirements for the same is enclosed in **Enclosure–B**.

11. PERIOD OF SERVICES

11.1 The services of the Project Management Consultant will be in phases as per the Contract / Concession Agreement.

11.2 The appointment of the Project Management Consultant shall initially be as per details given below.

The appointment of the Project Management Consultant shall initially be for 18 months The proposed manpower deployment for this period shall be matching the activities to be performed during the said period. The time frame for services during the deployment of key personnel during this period shall be as shown in **Enclosure A**.

Enclosure-A

MAN - MONTHS INPUT FOR KEY PROFESSIONAL STAFF FOR PROJECT MANAGEMENT CONSULTANT

S. No.	Key Personnel	Man-month in Construction period of 18 months
A: Key Personnel		
1.	Team Leader Cum Senior Highway Engineer	18
2.	Pavement Engineer	18
3.	Senior Quantity Cum Material Engineer	18
4.	Bridge/Structural Engineer	18
5.	Senior Quantity Surveyor	18
6.	Sr. Contract Specialist	6
7.	CAD Expert	6
	Sub Total	**102**
B: Sub Professional Staff		
(a)	Quantity Surveyor	1 X18
(b)	Survey Engineer	1X18
(c)	Lab Technician	2X18
(d)	Field Engineer	2X18
	Sub Total	**108**

Note: The qualification and experience of Sub Professional staff would not be accounted in the evaluation. However, Consultant shall have to get their CVs approved from Employer before mobilization. The other inputs like support staff shall also be provided by the Consultant of an acceptable type commensuration with the roles and responsibilities of each position.

Enclosure B

QUALIFICATION OF KEY PERSONNEL

1. TEAM LEADER CUM SENIOR HIGHWAY ENGINEER

Duties: The Team Leader will reside at project site on a full time basis throughout the period of the construction supervision services. He will be overall in-charge of the project supervision of the construction package. He shall act as Representative of the consulting firm appointed by the Authority. His duties will involve overall superintendence over the other experts of the construction package. He will guide, monitor, supervise and control all the activities related to supervision for the construction package. He will interact with the Project Director and the other officials of the Authority.

He should have the following qualification / experience.

Essential Qualifications.

(a) Graduate in Civil Engineering from recognized university.
(b) Total Professional Experience of 20 years in handling Highway Contracts.
(c) At least 5 years experience as Team Leader/Resident Engineer/Project Manager or similar capacity in Highway project.
(d) He should have handled as Team Leader/Resident Engineer/Project Manager or similar capacity of at least two projects in Construction Supervision of Highways.
(e) He should have handled as Team Leader or similar capacity of at least one Projects of project Preparation of major highway Project of two/ four- laning.
(f) Not more than 60 years of age.

Preferential Qualifications.

(a) Post Graduate Degree in Construction Management/Highway Engineering.
(b) Supervised Highway Construction projects with Flexible/Rigid Pavements.

Note:

1. Similar Capacity includes the following positions

   i) On behalf of Consultant :Team Leader/Resident Engineer (Construction Supervision /IE/AE).

   ii) On behalf of Contractor :Project Manager (Construction/ Construction Supervision)

   iii) In Government Organizations :Superintending Engineer (or equivalent) and above

2. Only those projects will be considered for evaluation at Sl. No. 1(d) and 1(e) above, where the input of the personnel is at least one year.

2. PAVEMENT ENGINEER

Duties: He shall be the in-charge of the construction supervision of project stretch and shall coordinate with all other experts of the construction projects and shall report to the Team Leader and officers of PIU as per the delegation established. He shall be directly responsible for regulating the construction process i.e. various activities like earthwork, Sub-base/base courses, bituminous pavement, bridge/culvert works proposed for being carried out under Stipulated specifications/manuals etc. For this purpose, he shall be assisted by Highway Engineer and other support engineers/personnel. He shall deal directly with the Highway Engineer and other support staff attached with the Highway Engineer to ensure that the construction process is well controlled as per established specification controls to avoid later quality control stage problems. In respect of other experts like Material Engineer, Quantity Surveyor, etc., he shall be coordinating and regulating their activities to ensure smooth functioning of the Construction Package concerned. He should have adequate experience in large quantity of earthwork. He will be required to be fielded throughout the Currency of the project. The candidate is expected to be thoroughly familiar with various standards/specifications, contract procedures, design and quality control etc. In addition he will be responsible for ensuring road safety during construction period of the project.

He should have the following qualification / experience.

Essential Qualifications.

(a) Graduate in Civil Engineering from a recognized University.
(b) Professional Experience of 12 years in supervision of Highway Projects.
(c) At least 8 years experience as Resident Engineer/Assistant Resident Engineer/Project Director/Project Manager/Superintending Engineer or equivalent/Executive Engineer or equivalent on similar construction work/Independent Engineering project.
(d) Should have handled at least 2 Highway projects of about 20-25 km each.
(e) Not more than 60 years of age.

Preferential Qualifications:

(a) Post Graduate Degree in Transportation/Pavement Engineering.
(b) Experience of Construction Supervision on Highway Project.

3. SENIOR CONTRACT SPECIALIST

Duties: He will be deployed in working season in stages for cumulative duration of period mentioned in Enclosure-A for obtaining his expert opinion on emerging contractual issues. His key responsibilities will be to guide and assist Team Leader/Employer in all aspects of contract management in proper implementation of contract provisions including controlling the project cost of the construction package. He will also be required to offer his advice on contractual complications arising during the implementation as per the request of the employer. He will be required to prepare manuals/schedules for the consultants team/employer based on the provisions

of the contract document. He will be responsible for giving appropriate suggestions in handling claims of the contractors and any dispute arising thereof.

Essential Qualifications:

(a) Graduate in Civil Engineering from a recognized University.
(b) Professional Experience of 15 years in Contract Management.
(c) Experience of at least 4 years as Contract Specialist on any National/State Highway project.
(d) Contract Management of a large Highway contract say over Rs.150 crore including experience of handling Variation orders, claims of the contractor and there appropriate disposal.
(e) Handled Arbitration cases in respect of any Highway project.
(f) Not more than 60 years of age.

Preferential Qualifications

(a) Degree in Law/PG in management/certificate course in management/ certificate course in construction management/certificate course in contract management.

4. BRIDGE & STRUCTURAL ENGINEER

Duties: His duties will involve understanding the design provisions of both bridges/ROBs/flyovers and culverts, guiding and checking of reinforcement/cable laying operations, rectifying any apparent mistakes in respect of them, checking and controlling the proper mix designs, Checking the adequacy of proper form-work, laying/compacting of concrete including curing operations. For this purpose, he will work in close coordination with the Material Engineer and the Contractor's Expert to effectively Control the quality of execution. He will be responsible for minor modifications in design of bridges/culverts, whenever required during execution.

He should have the following qualification / experience.

Essential Qualifications:

(a) Graduate in Civil Engineering from a recognized University.
(b) Professional Experience of 15 years.
(c) 10 years experience in Construction / Construction Supervision of bridge / interchange / any other structures.
(d) Must be familiar with modern methods of construction of bridges/ROB/flyover involving RCC/pre- stress concrete, design standards, technical specifications and statistical Quality Control/Assurance procedures for construction of different component of bridges.
(e) Experience in similar capacity in supervision of 2 Major Highway Bridges on Pile/Well foundation.
(f) Experience in supervision of Rehabilitation and repair of 2 nos Bridges.
(g) Not more than 60 years of age.

Preferential Qualifications.

(a) Post Graduate Degree in Structural Engineering. Experience as a Bridge Engineer abroad.

5. SENIOR QUALITY CUM MATERIAL ENGINEER

Duties: He will be responsible for supervising all the tests to be done in different stages of construction, besides ensuring that specified tests are done as per codal stipulations and as per the specifications laid down in the contract for all the different stages of construction. He will be coordinating and controlling the support personnel placed with him and will report to the Resident Engineer and to the Team Leader/Employer's representative as and when required.
He should have the following qualification/experience.

Essential Qualifications.

(a) Graduate in Civil Engineering from a recognized University.
(b) Professional Experience of 15 years in construction of Highways / Roads / Airfield Runways Experience of 5 years in similar capacity in Construction / Construction Supervision of Highway projects.
(c) At least 5 years experience as Quality / Material Engineer in Construction/Construction Supervision of Highway projects.
(d) Must be familiar with material property of road construction material, technical specifications and procedures of material tests and testing equipments.
(e) Not more than 60 years of age.

Preferential Qualifications:

Post Graduate Degree in Geo-Technical Engineering/Soil Mechanics and Foundation Engineering.

6. SENIOR QUANTITY SURVEYOR

Duties: He will be reporting to the Team Leader and give input as and when required during the work. He will provide necessary guidance to the Quantity Surveyor, and shall issue directions/procedures/formats of reporting to the Quantity Surveyor. He will act as a contract specialist also for the construction package, even though the thrust of his responsibilities will be in the areas of quantity surveying/processing of the invoices etc. He will be responsible for taking all measures required to control the project cost and time over-runs. He will examine the claims of the contractor, variation orders, if any, and will approved the progress reports as per the project requirements. He will approve the measurement of all items of works executed in different stages for payment purpose prepared by Quantity Surveyor. He should have the following qualification/ experience.

Essential Qualifications.

(a) Graduate in Civil Engineering from recognized university.
(b) Total Professional Experience of 15 years in handling Highway Contracts.
(c) At least 10 years experience as Quantity Surveyor in Highway project.
(d) He should have handled as Quantity Surveyor in at least two projects in Construction Supervision of Two/four laning of Highways.
(e) Not more than 60 years of age.

Preferential Qualifications:

(a) Post Graduate Degree in Construction Management/Engineering/certificate course in management/ certificate course in construction management/certificate course in contract management.

7. CAD EEPERT

Duties: He will be responsible for preparation of AutoCad drawings as per the project requirements. He will be reporting to the Team Leader and give input as and when required during the work. He will provide necessary inputs to the Quantity Surveyor, experience.

Essential Qualifications:

(a) Diploma / Graduate in Civil Engineering from recognized university.
(b) Total Professional Experience of 10 years in preparing project drawings of Highway Contracts.
(c) At least 4 years experience as CAD Engineer in Highway supervision project.
(d) Not more than 60 years of age.

SUB PROFESSIONAL (To be evaluated for their suitability by Employer's Representative, before deployment)

1. **Quantity Surveyor**

Duties: He will be reporting to the Resident Engineer in day to day working. He will also work under the guidance of the Sr. Quantity Surveyor, and shall abide by the directions/procedures/formats of reporting and approvals settled by the Sr. Quantity Surveyor. He will act as a contract specialist also for the construction package, even though the thrust of his responsibilities will be in the areas of quantity surveying/processing of the invoices etc. He will be responsible for reporting all measures required to control the project cost and time over-runs. He will examine the claims of the contractor, variation orders, if any, and will prepare the progress reports as per the project requirements. For the purpose, he will be required to get the levels and quantity measurements checked in all items of works executed in different stages for calculations required for payment purpose. He will be required throughout the currency of the project.

Qualification and experience: The candidate should be a graduate in Civil Engineering with relevant experience in the field of estimating, preparation and processing of the invoices, analysing rates, checking survey details etc. of the projects. He should have about 8 years of relevant professional experience involving resource planning and scheduling, quantity survey, cost control, contract management etc. Diploma holders with longer relevant experience of about 12 years could also be considered. He must have worked as Quantity Surveyors for at least 4 years in any National/State Highway Projects. He should not be more than 60 years of age.

2. **Survey Engineer**

Duties: Checking layout and centre line, layout of curves, levels and profiles, etc. will be his main responsibility. Apart from this, he shall also assist the Quantity Surveyor in preparation of invoices. He shall also be responsible for modifying survey data in case any modification is required in the design during execution.

Qualifications and Experience: He should be a graduate civil engineer with 3 years for BE Civil & 6 years for Diploma holder. Survey Engineer should be conversant with modem survey equipment, total stations, auto level, digital level etc. He should have worked in at least one major highway project. He should not be more than 60 years of age.

3. **Lab Technicians:**

They should be at least Diploma-holders with about 5 to 6 years of experience in handling the quality control tests laboratories for road/bridge works or Graduates in Science with about 1 to 2 years of relevant experience in the field of testing of road/bridge projects.

4. **Field Engineer**

Field Engineer shall be responsible for supervising the works of road projects to be constructed by the Concessionaire for this project. He shall also inspect the pavement rehabilitation and repair works to be undertaken by the Contractor/ Concessionaire.

The position requires a graduate in Civil Engineer, preferable Post Graduate in Civil Engineering. He should have a minimum of 5 years of professional engineering experience in supervision of highway projects including 5 years in similar capacity for major highway projects. He should have handled at least 2 major highway projects of 50km length in similar capacity

SCHEDULE–2

Draft Contract Agreement

FOR

"Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track"

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AGREEMENT

Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track

This AGREEMENT (hereinafter called the "**Agreement**") is made on the .....……. day of the month of …… 2016 between, on the one hand, the Chhattisgarh Road Development Corporation Limited, Raipur, C.G. (CGRDC) (hereinafter called the "**Authority**" which expression shall include their respective successors and permitted assigns, unless the context otherwise requires) and, on the other hand, ……. (hereinafter called the "**Consultant**" which expression shall include their respective successors and permitted assigns).

WHEREAS

(A) The Authority vide its Request for Proposal for Preparation of Detailed Project Report (hereinafter called the "**Consultancy**") for the "Preparation of Detailed Project Report (DPR) and Project Management Consultancy for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track " (hereinafter called the "**Project**")";

(B) The Consultant submitted its proposals for the aforesaid work, whereby the Consultant represented to the Authority that it had the required professional skills, and in the said proposals the Consultant also agreed to provide the Services to the Authority on the terms and conditions as set forth in the RFP and this Agreement; and

(C) the Authority, on acceptance of the aforesaid proposals of the Consultant, awarded the Consultancy to the Consultant vide its Letter of Award dated ..... (the "**LOA**"); and

(D) in pursuance of the LOA, the parties have agreed to enter into this Agreement.

NOW, THEREFORE, the parties hereto hereby agree as follows:

1. GENERAL

1.1 Definitions and Interpretation

1.1.1 The words and expressions beginning with capital letters and defined in this Agreement shall, unless the context otherwise requires, have the meaning hereinafter respectively assigned to them:

(a) "**Agreement**" means this Agreement, together with all the Annexes;

(b) "**Agreement Value**" shall have the meaning set forth in Clause 6.1.2;

(c) "**Applicable Laws**" means the laws and any other instruments having the force of law in India as they may be issued and in force from time to time;

(d) "**Confidential Information**" shall have the meaning set forth in Clause 3.3;

(e) "**Conflict of Interest**" shall have the meaning set forth in Clause 3.2 read with the provisions of RFP;

(f) "**Dispute**" shall have the meaning set forth in Clause 9.2.1;

(g) "**Effective Date**" means the date on which this Agreement comes into force and effect pursuant to Clause 2.1;

(h) "**Expatriate Personnel**" means such persons who at the time of being so hired had their domicile outside India;

(i) "**Government**" means the Government of India / Chhattisgarh;

(j) "**INR**, **Re**. or **Rs**." means Indian Rupees;

(k) "**Member**", in case the Consultant consists of a joint venture or consortium of more than one entity, means any of these entities, and "Members" means all of these entities;

(l) "**Party**" means the Authority or the Consultant, as the case may be, and Parties means both of them;

(m) "**Personnel**" means persons hired by the Consultant or by any Sub-Consultant as employees and assigned to the performance of the Services or any part thereof;

(n) "**Resident Personnel**" means such persons who at the time of being so hired had their domicile inside India;

(o) "**RFP**" means the Request for Proposal document in response to which the Consultant's proposal for providing Services was accepted;

(p) "**Services**" means the work to be performed by the Consultant pursuant to this Agreement, as described in the Terms of Reference hereto;

(q) "**Sub-Consultant**" means any entity to which the Consultant subcontracts any part of the Services in accordance with the provisions of Clause 4.7; and

(r) "**Third Party**" means any person or entity other than the Government, the Authority, the Consultant or a Sub-Consultant.

All terms and words not defined herein shall, unless the context otherwise requires, have the meaning assigned to them in the RFP.

1.1.2 The following documents along with all addenda issued thereto shall be deemed to form and be read and construed as integral parts of this Agreement and in case of any contradiction between or among them the priority in which a document would prevail over another would be as laid down below beginning from the highest priority to the lowest priority:

(a) Agreement;
(b) Annexes of Agreement;
(c) RFP; and
(d) Letter of Award.

1.2 Relation between the Parties

Nothing contained herein shall be construed as establishing a relation of master and servant or of agent and principal as between the Authority and the Consultant. The Consultant shall,

subject to this Agreement, have complete charge of Personnel performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.

1.3 Rights and obligations

The mutual rights and obligations of the Authority and the Consultant shall be as set forth in the Agreement, in particular:

(a) the Consultant shall carry out the Services in accordance with the provisions of the Agreement; and

(b) the Authority shall make payments to the Consultant in accordance with the provisions of the Agreement.

1.4 Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts in the State in which the Authority has its headquarters shall have exclusive jurisdiction over matters arising out of or relating to this Agreement.

1.5 Language

All notices required to be given by one Party to the other Party and all other communications, documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

1.6 Table of contents and headings

The table of contents, headings or sub-headings in this Agreement are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement.

1.7 Notices

Any notice or other communication to be given by any Party to the other Party under or in connection with the matters contemplated by this Agreement shall be in writing and shall:

(a) in the case of the Consultant, be given by e-mail and by letter delivered by hand to the address given and marked for attention of the Consultant's Representative set out below in Clause 1.9 or to such other person as the Consultant may from time to time designate by notice to the Authority; provided that notices or other communications to be given to an address outside the city specified in Sub-clause (b) below may, if they are subsequently confirmed by sending a copy thereof by registered acknowledgement due, air mail or by courier, be sent by e-mail to the number as the Consultant may from time to time specify by notice to the Authority;

(b) in the case of the Authority, be given by e-mail and by letter delivered by hand and be addressed to the Authority with a copy delivered to the Authority Representative set out below in Clause 1.9 or to such other person as the Authority may from time to time designate by notice to the Consultant; provided that if the Consultant does not have an office in the same city as the Authority's office, it may send such notice by e-mail and by registered acknowledgement due, air mail or by courier; and

(c) any notice or communication by a Party to the other Party, given in accordance herewith, shall be deemed to have been delivered when in the normal course of post it ought to have been delivered and in all other cases, it shall be deemed to have been

delivered on the actual date and time of delivery; provided that in the case of e-mail, it shall be deemed to have been delivered on the working days following the date of its delivery.

1.8 Location

1.8.1 The Services shall be performed at the site of the Project and offices of the Authority in accordance with the provisions of RFP and at such locations as are incidental thereto, including the offices of the Consultant.

1.8.2 The Authority may require the Team Leader to spend the required man days at the offices of the Authority and the Consultant agrees and undertakes to provide such services on a best effort basis and without any unreasonable delay.

1.9 Authorised Representatives

1.9.1 Any action required or permitted to be taken, and any document required or permitted to be executed, under this Agreement by the Authority or the Consultant, as the case may be, may be taken or executed by the officials specified in this Clause 1.10.

1.9.2 The Authority may, from time to time, designate one of its officials as the Authority Representative. Unless otherwise notified, the Authority Representative shall be:

Shri G.S. Solanki
General Manager, CGRDC
Phone: 0771-4263242
Mobile: 9425207316
Email: gm@cgrdc.in

1.9.3 The Consultant may designate one of its employees as Consultant's Representative. Unless otherwise notified, the Consultant's Representative shall be:

.....

.....

Tel: .....

Mobile: .....

Email: .....

1.10 Taxes and duties

Unless otherwise specified in the Agreement, the Consultant shall pay all such taxes, duties, fees and other impositions as may be levied under the Applicable Laws and the Authority shall perform such duties in regard to the deduction of such taxes as may be lawfully imposed on it. The Authority shall reimburse only Service tax on production of project specific proof of payment of Service tax.

2. COMMENCEMENT, COMPLETION AND TERMINATION OF AGREEMENT

2.1 Effectiveness of Agreement

This Agreement shall come into force and effect on the date of this Agreement or on the date of the Authority's notice to the Consultants instructing the Consultants to begin carrying out the Services whichever is earlier (the "**Effective Date**")

2.2 Commencement of Services

The Consultant shall commence the Services within a period of 7 (seven) days from the Effective Date, unless otherwise agreed by the Parties.

2.3 Termination of Agreement for failure to commence Services

If the Consultant does not commence the Services within the period specified in Clause 2.2 above, the Authority may, by not less than 1 (one) weeks' notice to the Consultant, declare this Agreement to be null and void, and in the event of such a declaration, the Bid Security of the Consultant shall stand forfeited.

2.4 Expiry of Agreement

Unless terminated earlier pursuant to Clauses 2.3 or 2.9 hereof, this Agreement shall, unless extended by the Parties by mutual consent, expire upon the earlier of (i) expiry of a period of 120 (One Hundred Twenty) days after the delivery of the final deliverable to the Authority; and (ii) the expiry of 1 (one) year from the Effective Date. Upon Termination, the Authority shall make payments of all amounts due to the Consultant hereunder.

2.5 Entire Agreement

2.5.1 This Agreement and the Annexes together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof, and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement are abrogated and withdrawn; provided, however, that the obligations of the Consultant arising out of the provisions of the RFP shall continue to subsist and shall be deemed to form part of this Agreement.

2.5.2 Without prejudice to the generality of the provisions of Clause 2.5.1, on matters not covered by this Agreement, the provisions of RFP shall apply.

2.6 Modification of Agreement

Modification of the terms and conditions of this Agreement, including any modification of the scope of the Services, may only be made by written agreement between the Parties. Pursuant to Clauses 4.2.3 and 6.1.3 hereof, however, each Party shall give due consideration to any proposals for modification made by the other Party.

2.7 Force Majeure

2.7.1 Definition

(a) For the purposes of this Agreement, "**Force Majeure**" means an event which is beyond the reasonable control of a Party, and which makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil

disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies.

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

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

2.7.2 **No breach of Agreement**

The failure of a Party to fulfil any of its obligations hereunder shall not be considered to be a breach of, or default under, this Agreement 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 Agreement.

2.7.3 **Measures to be taken**

(a) A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfil its obligations hereunder with a minimum of delay.

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

(c) The Parties shall take all reasonable measures to minimise the consequences of any event of Force Majeure.

2.7.4 **Extension of time**

Any period within which a Party shall, pursuant to this Agreement, 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.

2.7.5 **Payments**

During the period of its inability to perform the Services as a result of an event of Force Majeure, the Consultant shall be entitled to be reimbursed for Additional Costs reasonably and necessarily incurred by it during such period for the purposes of the Services and in reactivating the Services after the end of such period.

2.7.6 Consultation

Not later than 30 (thirty) days after the Consultant has, as the result of an event of Force Majeure, become unable to perform a material portion of the Services, the Parties shall consult with each other with a view to agreeing on appropriate measures to be taken in the circumstances.

2.8 Suspension of Agreement

The Authority may, by written notice of suspension to the Consultant, suspend all payments to the Consultant hereunder if the Consultant shall be in breach of this Agreement or shall fail to perform any of its obligations under this Agreement, including the carrying out of the Services; provided that such notice of suspension (i) shall specify the nature of the breach or failure, and (ii) shall provide an opportunity to the Consultant to remedy such breach or failure within a period not exceeding 15 (Fifteen) days after receipt by the Consultant of such notice of suspension.

2.9 Termination of Agreement

2.9.1 By the Authority

The Authority may, by not less than 15 (Fifteen) days' written notice of termination to the Consultant, such notice to be given after the occurrence of any of the events specified in this Clause 2.9.1, terminate this Agreement if:

(a) the Consultant fails to remedy any breach hereof or any failure in the performance of its obligations hereunder, as specified in a notice of suspension pursuant to Clause 2.8 hereinabove, within 30 (thirty) days of receipt of such notice of suspension or within such further period as the Authority may have subsequently granted in writing;

(b) the Consultant becomes insolvent or bankrupt or enters into any agreement with its creditors for relief of debt or take advantage of any law for the benefit of debtors or goes into liquidation or receivership whether compulsory or voluntary;

(c) the Consultant fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 9 hereof;

(d) the Consultant submits to the Authority a statement which has a material effect on the rights, obligations or interests of the Authority and which the Consultant knows to be false;

(e) any document, information, data or statement submitted by the Consultant in its Proposals, based on which the Consultant was considered eligible or successful, is found to be false, incorrect or misleading;

(f) 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 60 (sixty) days; or

(g) the Authority, in its sole discretion and for any reason whatsoever, decides to terminate this Agreement.

2.9.2 By the Consultant

The Consultant may, by not less than 30 (thirty) days' written notice to the Authority, such notice to be given after the occurrence of any of the events specified in this Clause 2.9.2, terminate this Agreement if:

(a) the Authority fails to pay any money due to the Consultant pursuant to this Agreement and not subject to dispute pursuant to Clause 9 hereof within 45 (forty five) days after receiving written notice from the Consultant that such payment is overdue;

(b) the Authority is in material breach of its obligations pursuant to this Agreement and has not remedied the same within reasonable time following the receipt by the Authority of the Consultant's notice specifying such breach;

(c) 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 60 (sixty) days; or

(d) the Authority fails to comply with any final decision reached as a result of arbitration pursuant to Clause 9 hereof.

2.9.3 Cessation of rights and obligations

Upon termination of this Agreement pursuant to Clauses 2.3 or 2.9 hereof, or upon expiration of this Agreement pursuant to Clause 2.4 hereof, 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, or which expressly survive such Termination; (ii) the obligation of confidentiality set forth in Clause 3.3 hereof; (iii) the Consultant's obligation to permit inspection, copying and auditing of such of its accounts and records set forth in Clause 3.6, as relate to the Consultant's Services provided under this Agreement; and (iv) any right or remedy which a Party may have under this Agreement or the Applicable Law.

2.9.4 Cessation of Services

Upon termination of this Agreement by notice of either Party to the other pursuant to Clauses 2.9.1 or 2.9.2 hereof, 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 Authority, the Consultant shall proceed as provided respectively by Clauses 3.9 or 3.10 hereof.

2.9.5 Payment upon Termination

Upon termination of this Agreement pursuant to Clauses 2.9.1 or 2.9.2 hereof, the Authority shall make the following payments to the Consultant (after offsetting against these payments any amount that may be due from the Consultant to the Authority):

(i) remuneration pursuant to Clause 6 hereof for Services satisfactorily performed prior to the date of termination;

(ii) reimbursable expenditures pursuant to Clause 6 hereof for expenditures actually incurred prior to the date of termination; and

(iii) except in the case of termination pursuant to sub-clauses (a) through (e) of Clause 2.9.1 hereof, reimbursement of any reasonable cost incidental to the prompt and

orderly termination of the Agreement including the cost of the return travel of the Consultant's personnel.

2.9.6 Disputes about Events of Termination

If either Party disputes whether an event specified in Clause 2.9.1 or in Clause 2.9.2 hereof has occurred, such Party may, within 30 (thirty) days after receipt of notice of termination from the other Party, refer the matter to arbitration pursuant to Clause 9 hereof, and this Agreement shall not be terminated on account of such event except in accordance with the terms of any resulting arbitral award.

3. OBLIGATIONS OF THE CONSULTANT

3.1 General

3.1.1 Standards of Performance

The Consultant shall perform the Services and carry out its obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe and effective equipment, machinery, materials and methods. The Consultant shall always act, in respect of any matter relating to this Agreement or to the Services, as a faithful adviser to the Authority, and shall at all times support and safeguard the Authority's legitimate interests in any dealings with Sub-Consultants or Third Parties.

3.1.2 Terms of Reference

The scope of services to be performed by the Consultant is specified in the Terms of Reference (the "**TOR**") at Annex-1 of this Agreement. The Consultant shall provide the Deliverables specified therein in conformity with the time schedule stated therein.

3.1.3 Applicable Laws

The Consultant shall perform the Services in accordance with the Applicable Laws and shall take all practicable steps to ensure that any Sub-Consultant, as well as the Personnel and agents of the Consultant and any Sub-Consultant, comply with the Applicable Laws.

3.2 Conflict of Interest

3.2.1 The Consultant shall not have a Conflict of Interest and any breach hereof shall constitute a breach of the Agreement.

3.2.2 Consultant and Affiliates not to be otherwise interested in the Project

The Consultant agrees that, during the term of this Agreement and after its termination, the Consultant or any Associate thereof and any entity affiliated with the Consultant, as well as any Sub-Consultant and any entity affiliated with such Sub-Consultant, shall be disqualified from providing goods, works, services, loans or equity for any project resulting from or closely related to the Services and any breach of this obligation shall amount to a Conflict of Interest; provided that the restriction herein shall not apply after a period of five years from the completion of this assignment or to consulting assignments granted by banks/ lenders at any time; provided further that this restriction shall not apply to consultancy services

provided to the Authority in continuation of this Consultancy or to any subsequent consultancy services provided to the Authority in accordance with the rules of the Authority. For the avoidance of doubt, an entity affiliated with the Consultant shall include a partner in the Consultant's firm or a person who holds more than 5% (five per cent) of the subscribed and paid up share capital of the Consultant, as the case may be, and any Associate thereof.

3.2.3 Prohibition of conflicting activities

Neither the Consultant nor its Sub-Consultant nor the Personnel of either of them shall engage, either directly or indirectly, in any of the following activities:

(a) during the term of this Agreement, any business or professional activities which would conflict with the activities assigned to them under this Agreement;

(b) after the termination of this Agreement, such other activities as may be specified in the Agreement; or

(c) at any time, such other activities as have been specified in the RFP as Conflict of Interest.

3.2.4 Consultant not to benefit from commissions, discounts, etc.

The remuneration of the Consultant pursuant to Clause 6 hereof shall constitute the Consultant's sole remuneration in connection with this Agreement or the Services and the Consultant shall not accept for its own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Agreement or to the Services or in the discharge of its obligations hereunder, and the Consultant shall use its best efforts to ensure that any Sub-Consultant, as well as the Personnel and agents of either of them, similarly shall not receive any such additional remuneration.

3.2.5 The Consultant and its Personnel shall observe the highest standards of ethics and shall not have engaged in and shall not hereafter engage in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the "**Prohibited Practices**")**.** Notwithstanding anything to the contrary contained in this Agreement, the Authority shall be entitled to terminate this Agreement forthwith by a communication in writing to the Consultant, without being liable in any manner whatsoever to the Consultant, if it determines that the Consultant has, directly or indirectly or through an agent, engaged in any Prohibited Practices in the Selection Process or before or after entering into of this Agreement. In such an event, the Authority shall forfeit and appropriate the performance security, if any, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority towards, *inter alia*, the time, cost and effort of the Authority, without prejudice to the Authority's any other rights or remedy hereunder or in law.

3.2.6 Without prejudice to the rights of the Authority under Clause 3.2.5 above and the other rights and remedies which the Authority may have under this Agreement, if the Consultant is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any Prohibited Practices, during the Selection Process or before or after the execution of this Agreement, the Consultant shall not be eligible to participate in any tender or RFP issued during a period of 2 (two) years from the date the Consultant is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any Prohibited Practices.

3.2.7 For the purposes of Clauses 3.2.5 and 3.2.6, the following terms shall have the meaning hereinafter respectively assigned to them:

(a) "**corrupt practice**" means (i) the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Selection Process (for removal of doubt, offering of employment or employing or engaging in any manner whatsoever, directly or indirectly, any official of the Authority who is or has been associated in any manner, directly or indirectly with Selection Process or LOA or dealing with matters concerning the Agreement before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Authority, shall be deemed to constitute influencing the actions of a person connected with the Selection Process); or (ii) engaging in any manner whatsoever, whether during the Selection Process or after the issue of LOA or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the LOA or the Agreement, who at any time has been or is a legal, financial or technical adviser the Authority in relation to any matter concerning the Project;

(b) "**fraudulent practice**" means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Selection Process;

(c) "**coercive practice**" means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person's participation or action in the Selection Process or the exercise of its rights or performance of its obligations by the Authority under this Agreement;

(d) "**undesirable practice**" means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or (ii) having a Conflict of Interest; and

(e) "**restrictive practice**" means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair competition in the Selection Process.

3.3 Confidentiality

The Consultant, its Sub-Consultants and the Personnel of either of them shall not, either during the term or within two years after the expiration or termination of this Agreement disclose any proprietary information, including information relating to reports, data, drawings, design software or other material, whether written or oral, in electronic or magnetic format, and the contents thereof; and any reports, digests or summaries created or derived from any of the foregoing that is provided by the Authority to the Consultant, its Sub-Consultants and the Personnel; any information provided by or relating to the Authority, its technology, technical processes, business affairs or finances or any information relating to the Authority's employees, officers or other professionals or suppliers, customers, or contractors of the Authority; and any other information which the Consultant is under an obligation to keep confidential in relation to the Project, the Services or this Agreement ("**Confidential Information**"), without the prior written consent of the Authority.

Notwithstanding the aforesaid, the Consultant, its Sub-Consultants and the Personnel of either of them may disclose Confidential Information to the extent that such Confidential Information:

(i) was in the public domain prior to its delivery to the Consultant, its Sub-Consultants and the Personnel of either of them or becomes a part of the public knowledge from a source other than the Consultant, its Sub-Consultants and the Personnel of either of them;

(ii) was obtained from a third party with no known duty to maintain its confidentiality;

(iii) is required to be disclosed by Applicable Laws or judicial or administrative or arbitral process or by any governmental instrumentalities, provided that for any such disclosure, the Consultant, its Sub-Consultants and the Personnel of either of them shall give the Authority, prompt written notice, and use reasonable efforts to ensure that such disclosure is accorded confidential treatment; and

(iv) is provided to the professional advisers, agents, auditors or representatives of the Consultant or its Sub-Consultants or Personnel of either of them, as is reasonable under the circumstances; provided, however, that the Consultant or its Sub-Consultants or Personnel of either of them, as the case may be, shall require their professional advisers, agents, auditors or its representatives, to undertake in writing to keep such Confidential Information, confidential and shall use its best efforts to ensure compliance with such undertaking.

3.4 Liability of the Consultant

3.4.1 The Consultant's liability under this Agreement shall be determined by the Applicable Laws and the provisions hereof.

3.4.2 The Consultant shall, subject to the limitation specified in Clause 3.4.3, be liable to the Authority for any direct loss or damage accrued or likely to accrue due to deficiency in Services rendered by it.

3.4.3 The Parties hereto agree that in case of negligence or wilful misconduct on the part of the Consultant or on the part of any person or firm acting on behalf of the Consultant in carrying out the Services, the Consultant, with respect to damage caused to the Authority's property, shall not be liable to the Authority:

(i) for any indirect or consequential loss or damage; and

(ii) for any direct loss or damage that exceeds (a) the Agreement Value set forth in Clause 6.1.2 of this Agreement, or (b) the proceeds the Consultant may be entitled to receive from any insurance maintained by the Consultant to cover such a liability in accordance with Clause 3.5.2, whichever of (a) or (b) is higher.

3.4.4 This limitation of liability specified in Clause 3.4.3 shall not 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 subject, however, to a limit equal to 3 (three) times the Agreement Value.

3.5 Insurance to be taken out by the Consultant

3.5.1 (a) The Consultant shall, for the duration of this Agreement, take out and maintain, and shall cause any Sub-Consultant to take out and maintain, at its (or the Sub-Consultant's, as the case may be) own cost, but on terms and conditions approved by the Authority, insurance against the risks, and for the coverages, as specified in the Agreement and in accordance with good industry practice.

(b) Within 15 (fifteen) days of receiving any insurance policy certificate in respect of insurances required to be obtained and maintained under this clause, the Consultant shall furnish to the Authority, copies of such policy certificates, copies of the insurance policies and evidence that the insurance premia have been paid in respect of such insurance. No insurance shall be cancelled, modified or allowed to expire or lapse during the term of this Agreement.

(c) If the Consultant fails to effect and keep in force the aforesaid insurances for which it is responsible pursuant hereto, the Authority shall, apart from having other recourse available under this Agreement, have the option, without prejudice to the obligations of the Consultant, to take out the aforesaid insurance, to keep in force any such insurances, and pay such premia and recover the costs thereof from the Consultant, and the Consultant shall be liable to pay such amounts on demand by the Authority.

(d) Except in case of Third Party liabilities, the insurance policies so procured shall mention the Authority as the beneficiary of the Consultant and the Consultant shall procure an undertaking from the insurance company to this effect; provided that in the event the Consultant has a general insurance policy that covers the risks specified in this Agreement and the amount of insurance cover is equivalent to 3 (three) times the cover required hereunder, such insurance policy may not mention the Authority as the sole beneficiary of the Consultant or require an undertaking to that effect.

3.5.2 The Parties agree that the risks and coverages shall include but not be limited to the following:

(a) Third Party liability insurance as required under Applicable Laws, with a minimum coverage of INR 2 (Two) crore;

(b) employer's liability and workers' compensation insurance in respect of the Personnel of the Consultant and of any Sub-Consultant, in accordance with Applicable Laws; and

(c) professional liability insurance for an amount no less than the Agreement Value.
The indemnity limit in terms of "Any One Accident" (AOA) and "Aggregate limit on the policy period" (AOP) should not be less than the amount stated in Clause 6.1.2 of the Agreement.

3.6 Accounting, inspection and auditing

The Consultant shall:

(a) keep accurate and systematic accounts and records in respect of the Services provided under this Agreement, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify all relevant time charges and cost, and the basis thereof (including the basis of the Consultant's costs and charges); and

(b) permit the Authority or its designated representative periodically, and up to one year from the expiration or termination of this Agreement, to inspect the same and make copies thereof as well as to have them audited by auditors appointed by the Authority.

3.7 Consultant's actions requiring the Authority's prior approval

The Consultant shall obtain the Authority's prior approval in writing before taking any of the following actions:

(a) appointing such members of the Professional Personnel as are not listed in Annex–2.

(b) entering into a subcontract for the performance of any part of the Services, it being understood (i) that the selection of the Sub-Consultant and the terms and conditions of the subcontract shall have been approved in writing by the Authority prior to the execution of the subcontract, and (ii) that the Consultant shall remain fully liable for the performance of the Services by the Sub-Consultant and its Personnel pursuant to this Agreement; or

(c) Any other action that is specified in this Agreement.

3.8 Reporting obligations

The Consultant shall submit to the Authority the reports and documents specified in the Agreement, in the form, in the numbers and within the time periods set forth therein.

3.9 Documents prepared by the Consultant to be property of the Authority

3.9.1 All plans, drawings, specifications, designs, reports and other documents (collectively referred to as "**Consultancy Documents**") prepared by the Consultant (or by the Sub-Consultants or any Third Party) in performing the Services shall become and remain the property of the Authority, and all intellectual property rights in such Consultancy Documents shall vest with the Authority. Any Consultancy Document, of which the ownership or the intellectual property rights do not vest with the Authority under law, shall automatically stand assigned to the Authority as and when such Consultancy Document is created and the Consultant agrees to execute all papers and to perform such other acts as the Authority may deem necessary to secure its rights herein assigned by the Consultant.

3.9.2 The Consultant shall, not later than termination or expiration of this Agreement, deliver all Consultancy Documents to the Authority, together with a detailed inventory thereof. The Consultant may retain a copy of such Consultancy Documents. The Consultant, its Sub-Consultants or a Third Party shall not use these Consultancy Documents for purposes unrelated to this Agreement without the prior written approval of the Authority.

3.9.3 The Consultant shall hold the Authority harmless and indemnified for any losses, claims, damages, expenses (including all legal expenses), awards, penalties or injuries (collectively referred to as 'Claims') which may arise from or due to any unauthorised use of such Consultancy Documents, or due to any breach or failure on part of the Consultant or its Sub-Consultants or a Third Party to perform any of its duties or obligations in relation to securing the aforementioned rights of the Authority.

3.10 Equipment and materials furnished by the Authority

Equipment and materials made available to the Consultant by the Authority shall be the property of the Authority and shall be marked accordingly. Upon termination or expiration of this Agreement, the Consultant shall furnish forthwith to the Authority, an inventory of such equipment and materials and shall dispose of such equipment and materials in accordance with the instructions of the Authority. While in possession of such equipment and materials, the Consultant shall, unless otherwise instructed by the Authority in writing, insure them in an amount equal to their full replacement value.

3.11 Providing access to Project Office and Personnel

The Consultant shall ensure that the Authority, and officials of the Authority having authority from the Authority, are provided unrestricted access to the Project Office and to all Personnel during office hours. The Authority's official, who has been authorised by the Authority in this behalf, shall have the right to inspect the Services in progress, interact with Personnel of the Consultant and verify the records relating to the Services for his satisfaction.

3.12. Accuracy of Documents

The Consultant shall be responsible for accuracy of the data collected by it directly or procured from other agencies/authorities, the designs, drawings, estimates and all other details prepared by it as part of these services. Subject to the provisions of Clause 3.4, it shall indemnify the Authority against any inaccuracy in its work which might surface during implementation of the Project, if such inaccuracy is the result of any negligence or inadequate due diligence on part of the Consultant or arises out of its failure to conform to good industry practice. The Consultant shall also be responsible for promptly correcting, at its own cost and risk, the drawings including any re-survey / investigations.

4. CONSULTANT'S PERSONNEL AND SUB-CONSULTANTS

4.1 General

The Consultant shall employ and provide such qualified and experienced Personnel as may be required to carry out the Services.

4.2 Deployment of Personnel

4.2.1 The designations, names and the estimated periods of engagement in carrying out the Services by each of the Consultant's Personnel are described in Annex-2 of this Agreement.

4.2.2 Adjustments with respect to the estimated periods of engagement of Personnel may be made by the Consultant by written notice to the Authority, provided that: (i) such adjustments shall not alter the originally estimated period of engagement of any individual by more than 20% (twenty per cent) or one week, whichever is greater, and (ii) the aggregate of such adjustments shall not cause payments under the Agreement to exceed the Agreement Value set forth in Clause 6.1.2 of this Agreement. Any other adjustments shall only be made with the written approval of the Authority.

4.2.3 If additional work is required beyond the scope of the Services specified in the Terms of Reference, the estimated periods of engagement of Personnel, set forth in the Annexes of the Agreement may be increased by agreement in writing between the Authority and the

Consultant, provided that any such increase shall not, except as otherwise agreed, cause payments under this Agreement to exceed the Agreement Value set forth in Clause 6.1.2.

4.3 Approval of Personnel

4.3.1 The Professional Personnel listed in Annex-2 of the Agreement are hereby approved by the Authority. No other Professional Personnel shall be engaged without prior approval of the Authority.

4.3.2 If the Consultant hereafter proposes to engage any person as Professional Personnel, it shall submit to the Authority its proposal along with a CV of such person in the form provided at Appendix–I (Form-12) of the RFP. The Authority may approve or reject such proposal within 14 (fourteen) days of receipt thereof. In case the proposal is rejected, the Consultant may propose an alternative person for the Authority's consideration. In the event the Authority does not reject a proposal within 14 (fourteen) days of the date of receipt thereof under this Clause 4.3, it shall be deemed to have been approved by the Authority.

4.4 Substitution of Key Personnel

4.4 (a) Substitution of Key Personnel During DPR Preparation

The Authority will not normally consider any request of the Selected Applicant for substitution of Key Personnel as the ranking of the Applicant is based on the evaluation of Key Personnel and any change therein may upset the ranking. Substitution will, however, be permitted if the Key Personnel is not available for reasons of any incapacity or due to health, subject to equally or better qualified and experienced personnel being provided to the satisfaction of the Authority. Replacement of key personnel during Consultancy Services having selected Consultants among other things, on the basis of an evaluation of proposed key professional staff, the Employer expects to negotiate, within the proposal validity period, a contract on the basis of the staff named in the proposal and, prior to contract negotiations, will require assurances that the staff will be actually available. The Employer will not consider substitutions during contract implementation except under exceptional circumstances up to maximum of 25 percent of key personnel (considering equal weightage for each key personnel) and that too by only equally or better qualified and experienced personnel. During the course of providing services, substitution of key personnel may call for following deductions

Key Personnel	Deduction for First Substitution of Key Personnel (In Rupees)
Team Leader Cum Senior Highway Engineer ,	2,00,000.00
Bridge/Structural Design Engineer, Pavement Design / Traffic Engineer.	1,00,000.00
Environmental and Social R & R Expert, Land Assessment Expert, Senior Survey Engineer, Material cum Geotechnical Engineer / Expert, Quantity Surveyor/Documentation Expert.	1,00,000.00

4.4 (b) Substitution of Key Personnel During PMC Activities

In case notice to commence services is given within 120 days of negotiations the replacement shall be as below:

i. Replacement up to 33%: Replacement shall be by an equal or better scoring person. There will not be any Reduction in remunerations for the balance period.

ii. Replacement of more than 33% and up to 50% : Replacement shall be by an equal or better scoring person. Reduction in remunerations for the balance period shall be @ 10% of the monthly rate.

iii. Replacement beyond 50% and upto 66% . Replacement shall be by an equal or better scoring person. Reduction in remunerations for the balance period shall be @ 15% of the monthly rate.

iv. Replacement beyond 66 %shall normally not be considered. However in exceptional circumstances, where it becomes absolutely essential the remunerations of the substitute shall be reduced by 50 % of the original person replaced. Replacement shall be by an equal or better scoring person , The CGRDC may initiate action for termination/debarment of such consultant for future projects of CGRDC for a period of 6 months to 24 months depending upon the severity of case.

4.5 Working hours, overtime, leave, etc.

The Personnel shall not be entitled to be paid for overtime nor to take paid sick leave or vacation leave except as specified in the Agreement, and the Consultant's remuneration shall be deemed to cover these items. All leave to be allowed to the Personnel is excluded from the man days of service set forth in Annex-2. Any taking of leave by any Personnel for a period exceeding 7 (seven) days shall be subject to the prior approval of the Authority, and the Consultant shall ensure that any absence on leave will not delay the progress and quality of the Services.

4.6 Team Leader and Project Manager

The person designated as the Team Leader of the Consultant's Personnel shall be responsible for the coordinated, timely and efficient functioning of the Personnel. In addition, the Consultant shall designate a suitable person as Project Manager (the "**Project Manager**") who shall be responsible for day to day performance of the Services.

4.7 Sub-Consultants

Sub-Consultants listed in Annex-4 of this Agreement are hereby approved by the Authority. The Consultant may, with prior written approval of the Authority, engage additional Sub-Consultants or substitute an existing Sub-Consultant. The hiring of Personnel by the Sub-Consultants shall be subject to the same conditions as applicable to Personnel of the Consultant under this Clause 4.

5. OBLIGATIONS OF THE AUTHORITY

5.1 Assistance in clearances etc.

Unless otherwise specified in the Agreement, the Authority shall make best efforts to ensure that the Government shall:

(a) provide the Consultant, its Sub-Consultants and Personnel with work permits and such other documents as may be necessary to enable the Consultant, its Sub-Consultants or Personnel to perform the Services;

(b) facilitate prompt clearance through customs of any property required for the Services; and

(c) issue to officials, agents and representatives of the Government all such instructions as may be necessary or appropriate for the prompt and effective implementation of the Services.

5.2 Access to land and property

The Authority warrants that the Consultant shall have, free of charge, unimpeded access to the site of the project in respect of which access is required for the performance of Services; provided that if such access shall not be made available to the Consultant as and when so required, the Parties shall agree on (i) the time extension, as may be appropriate, for the performance of Services, and (ii) the additional payments, if any, to be made to the Consultant as a result thereof pursuant to Clause 6.1.3.

5.3 Change in Applicable Law

If, after the date of this Agreement, there is any change in the Applicable Laws with respect to taxes and duties which increases or decreases the cost or reimbursable expenses incurred by the Consultant in performing the Services, by an amount exceeding 2% (two per cent) of the Agreement Value specified in Clause 6.1.2, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Agreement shall be increased or decreased accordingly by agreement between the Parties hereto, and corresponding adjustments shall be made to the aforesaid Agreement Value.

5.4 Payment

In consideration of the Services performed by the Consultant under this Agreement, the Authority shall make to the Consultant such payments and in such manner as is provided in Clause 6 of this Agreement.

6. PAYMENT TO THE CONSULTANT

6.1 Cost estimates and Agreement Value

6.1.1 An abstract of the cost of the Services payable to the Consultant is set forth in Annex-5 of the Agreement**.**

6.1.2 Except as may be otherwise agreed under Clause 2.6 and subject to Clause 6.1.3, the payments under this Agreement shall not exceed the agreement value specified herein (the "Agreement Value"). The Consultants shall notify the Client as soon as cumulative charges incurred for the Services have reached 80% of the Agreement Value.

6.1.3 Notwithstanding anything to the contrary contained in Clause 6.1.2, if pursuant to the provisions of Clauses 2.6 and 2.7, the Parties agree that additional payments shall be made to the Consultant in order to cover any additional expenditures not envisaged in the cost estimates referred to in Clause 6.1.1 above, the Agreement Value set forth in Clause 6.1.2

above shall be increased by the amount or amounts, as the case may be, of any such additional payments.

6.2 Currency of payment

All payments shall be made in Indian Rupees. The Consultant shall be free to convert Rupees into any foreign currency as per Applicable Laws.

6.3 Mode of billing and payment

Billing and payments in respect of the Services shall be made as follows:-

6.3 (a) Payment for DPR Works

(a) The Consultant shall be paid for its services as per the Payment Schedule at Annex-6 for DPR, subject to the Consultant fulfilling the following conditions:

(i) No payment shall be due for the next stage till the Consultant completes, to the satisfaction of the Authority, the work pertaining to the preceding stage.

(ii) The Authority shall pay to the Consultant, only the undisputed amount.

(b) The Authority shall cause the payment due to the Consultant to be made within 30 (thirty) days after the receipt by the Authority of duly completed bills with necessary particulars (the "**Due Date**").

(c) The final payment under this Clause shall be made only after the final report and a final statement, identified as such, shall have been submitted by the Consultant and approved as satisfactory by the Authority. The Services shall be deemed completed and finally accepted by the Authority and the final deliverable shall be deemed approved by the Authority as satisfactory upon expiry of 90 (ninety) days after receipt of the final deliverable by the Authority unless the Authority, within such 90 (ninety) day period, gives written notice to the Consultant specifying in detail, the deficiencies in the Services. The Consultant shall thereupon promptly make any necessary corrections and/or additions, and upon completion of such corrections or additions, the foregoing process shall be repeated. The Authority shall make the final payment upon acceptance or deemed acceptance of the final deliverable by the Authority.

(d) Any amount which the Authority has paid or caused to be paid in excess of the amounts actually payable in accordance with the provisions of this Agreement shall be reimbursed by the Consultant to the Authority within 30 (thirty) days after receipt by the Consultant of notice thereof. Any such claim by the Authority for reimbursement must be made within 1 (one) year after receipt by the Authority of a final report in accordance with Clause 6.3 (c). Any delay by the Consultant in reimbursement by the due date shall attract simple interest @ 10% (ten per cent) per annum.

(e) All payments under this Agreement shall be made to the account of the Consultant as may be notified to the Authority by the Consultant.

6.3 (b) Payment for PMC Works

The payment schedule during supervision work (PMC work) as an act of PMC, the payment would be strictly as per man- months basis as quoted in Form 3 of Appendix II.

Note: Consultants have to provide a certificate that all key personnel as envisaged in the Contract Agreement has been actually deployed in the project. They have to submit this certificate at the time of submission of bills to CGRDC from time to time .

(c) No payment shall become eligible for the next stage till the consultant completes to the satisfaction of the client the work pertaining to the preceding stage. Any adjustment in the payment to the consultants will be made in the final payment only.

(d) The final payment under this Clause shall be made only after the final report and a final statement, identified as such, shall have been submitted by the Consultants and approved as satisfactory by the Client. The Services shall be deemed completed and finally accepted by the Client and the final report and final statement shall be deemed approved by the Client as satisfactory one hundred and eighty (180) calendar days after receipt of the final report and final statement by the Client unless the Client, within ninety(90) day period, gives written notice to the Consultants specifying in detailed deficiencies in the Services, the final report or final statement. The Consultants shall thereupon promptly make any necessary corrections, and upon completion of such corrections, the foregoing process shall be repeated. Any amount which the Client has paid or caused to be paid in accordance with this Clause in excess of the amounts actually payable in accordance with the provisions of this Contract shall be reimbursed by the Consultants to the Client within thirty (30) days after receipt by the Consultants of notice thereof. Any such claim by the Client for reimbursement must be made within twelve (12) calendar months after receipt by the Client of a final report and a final statement approved by the Client in accordance with the above.

7. LIQUIDATED DAMAGES AND PENALTIES

7.1 Performance Security

The selected Applicant shall submit a Performance Security (ies) to the Authority in the form of Bank Guarantee (The BG shall be in the format specified in Annex-7 of draft contract agreement and furnished from a Nationalized /Scheduled Bank approved by RBI, having a Net Worth of not less than Rs. 500 crore as per latest Annual Report of the Bank) /TDR/FDR on any Scheduled Bank in India in favour of Managing Director, Chhattisgarh Road Development Corporation Limited, Raipur and payable at Raipur as below:

5.00% (Five percent) of the Consultancy Fee for the DPR Preparation (as per the Appendix – II, Form 3), within 7 (Seven) days of date of issue of LOA, valid till 2 months from the date of completion of PMC services. and

5.00% (Five percent) of the Consultancy Fee of PMC works (as per Appendix II , Fprm-4), within 7 (Seven) days of date of issue of LOA for PMC Services, valid till 2 months from the date of completion of PMC services. If the period of services/contract agreement is increased, then the validity period of BG shall accordingly be extended.

7.1.1 In addition to the above, the Authority shall retain by way of Security Deposit (the "**Security Deposit**"), 5% (five per cent) of all the amounts due and payable to the Consultant, to be appropriated against breach of this Agreement or for recovery of liquidated damages as specified in Clause 7.2. The balance remaining out of the Security Deposit shall be returned to the Consultant at the end of 3 (three) months after the expiry of this Agreement pursuant to Clause 2.4 hereof. For the avoidance of doubt, the parties hereto expressly agree that in addition to appropriation of the amounts withheld hereunder, in the event of any default requiring the appropriation of further amounts comprising the Security Deposit, the Authority may make deductions from any subsequent payments due and payable to the Consultant hereunder, as if it is appropriating the Security Deposit in accordance with the provisions of this Agreement.

7.1.2 The Consultant may, in lieu of retention of the amounts as referred to in Clause 7.1.1 above, furnish a Bank Guarantee substantially in the form specified at Annex-7 of this Agreement

7.2 Liquidated Damages

7.2.1 Liquidated Damages for error/variation

In case any error or variation is detected in the reports submitted by the Consultant and such error or variation is the result of negligence or lack of due diligence on the part of the Consultant, the consequential damages thereof shall be quantified by the Authority in a reasonable manner and recovered from the Consultant by way of deemed liquidated damages, subject to a maximum of 50% (fifty per cent) of the Agreement Value.

7.2.2 Liquidated Damages for delay

In case of delay in completion of Services, liquidated damages not exceeding an amount equal to 0.2% (zero point two per cent) of the Agreement Value per day, subject to a maximum of 10% (ten per cent) of the Agreement Value will be imposed and shall be recovered by appropriation from the Performance Security or otherwise. However, in case of delay due to reasons beyond the control of the Consultant, suitable extension of time shall be granted.

7.2.3 Encashment and appropriation of Performance Security

The Authority shall have the right to invoke and appropriate the proceeds of the Performance Security, in whole or in part, without notice to the Consultant in the event of breach of this Agreement or for recovery of liquidated damages specified in this Clause 7.2.

7.3 Penalty for deficiency in Services

In addition to the liquidated damages not amounting to penalty, as specified in Clause 7.2, warning may be issued to the Consultant for minor deficiencies on its part. In the case of significant deficiencies in Services causing adverse effect on the Project or on the reputation of the Authority, other penal action including debarring for a specified period may also be initiated as per policy of the Authority.

FAIRNESS AND GOOD FAITH

8.1 Good Faith

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

8.2 Operation of the Agreement

The Parties recognise that it is impractical in this Agreement to provide for every contingency which may arise during the life of the Agreement, and the Parties hereby agree that it is their intention that this Agreement shall operate fairly as between them, and without detriment to the interest of either of them, and that, if during the term of this Agreement either Party believes that this Agreement is operating unfairly, the Parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but failure to agree on any action pursuant to this Clause shall not give rise to a dispute subject to arbitration in accordance with Clause 9 hereof.

9. SETTLEMENT OF DISPUTES

9.1 Amicable settlement

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Agreement or the interpretation thereof.

9.2 Dispute resolution

9.2.1 Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "**Dispute**") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure set forth in Clause 9.3.

9.2.2 The Parties agree to use their best efforts for resolving all Disputes arising under or in respect of this Agreement promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all non-privileged records, information and data pertaining to any Dispute.

9.3 Conciliation

In the event of any Dispute between the Parties, either Party may call upon Managing Director, CGRDC, Raipur and the Chairman of the Board of Directors of the Consultant or a substitute thereof for amicable settlement, and upon such reference, the said persons shall meet no later than 10 (Ten) day from the date of reference to discuss and attempt to amicably resolve the Dispute. If such meeting does not take place within the 10 (Ten) day period or the Dispute is not amicably settled within 15 (Fifteen) day of the meeting or the Dispute is not resolved as evidenced by the signing of written terms of settlement within 30 (Thirty) day of the notice in writing referred to in Clause 9.2.1 or such longer period as may be mutually agreed by the Parties, either Party may refer the Dispute to arbitration in accordance with the provisions of Clause 9.4.

9.4 Disputes shall be settled by arbitration in accordance with the following provisions:

9.4.1 **Selection of Arbitrators**

Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator whose appointment shall be made in accordance with the Rules. 9.4.2 The arbitrators shall make a reasoned award (the "Award"). Any Award made in any arbitration held pursuant to this Clause 9 shall be final and binding on the Parties as from the date it is made, and the Consultant and the Authority agree and undertake to carry out such Award without delay.

9.4.2 Rules of Procedure

Arbitration proceedings shall be conducted in accordance with procedure of the Arbitration & Conciliation Act 1996, of India unless the Consultant is a foreign national/firm, where arbitration proceedings shall be conducted in accordance with the rules of procedure for arbitration of the United Nations Commission on International Trade Law (UNCITRAL) as in force on the date of this Contract.

9.4.3 Substitute Arbitrators

If for any reason an arbitrator is unable to perform his function, a substitute shall be appointed in the same manner as the original arbitrator.

9.4.4 Qualifications of Arbitrators

Deleted

9.4.5 Miscellaneous

In any arbitration proceeding hereunder:

a. Proceedings shall, unless otherwise agreed by the Parties, be held in DELHI
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. The maximum amount payable per Arbitrator in Arbitration clauses shall be as under

S. No	Particulars	Maximum amount payable per Arbitrator/ per case
1	Arbitrator fee	Rs 15,000/- per day subject to a maximum of Rs 4 .00 lacs or Rs 2.5 lacs (lump sum) subject to publishing the award within 12months.
2	Reading charges	Rs 15,000/-
3	Secretarial Assistance and Incidental	Rs 20,000/-
4	Charges for publishing/ declaration of the award	Rs 20,000/-

5	Other expenses (As per actual against bills subject to maximum of the prescribed celling given below)	
	Traveling expenses Lodging and Boarding	Economy class (by air), First class AC (by train) and AC Car (by road) a) Rs 15,000/- per day (in metro cities) b) Rs 7,000/- per day (in other cities) c) Rs 3,000/- per day if any Arbitrator makes own arrangements.
6	Extra charges for days other than hearing/ meeting days (maximum for 2 days)	Rs 3,500/- per day

Note:-
1. Lodging boarding and traveling expenses shall be allowed only for those members who are residing 100 kms. Away from place of meeting.
2. Delhi, Mumbai, Chennai, Kolkata, Bangalore and Hyderabad shall be considered as Metro Cities.

In exceptional cases, such as cases involving major legal implications/ wider ramifications/ higher financial stakes etc., a special fee structure could be fixed in consultation with the Contractor/ Supervision Consultants and with the specific approval of the Managing Director, CGRDC before appointment of the Arbitrator,

10. Change of Scope

The change of Scope on account of variation of Project Road Length (For part 1 of scope of service), from the indicative figures as mentioned under clause 1.1 shall be dealt as follows:

i) During the course of consultancy services in case it is considered necessary to increase/decrease the scope of services (of total area or length as compared to indicative length as given in the RFP) by the Authority the same shall be notified by Change of scope notice. Similarly, if the Consultant determines that change of scope is needed, he shall inform of the same to the Authority. The Authority will examine and shall either reject the proposal or issue change of scope notice.

ii) The Consultancy fee shall be revised on account of change of scope as below:
In case the total length of project increase/ decrease up to more 10% of indicative length given in the RFP there shall be no change in Consultancy Fees as quoted. In case the increase/ decrease in total length of project is more than 10% of the indicative length as given in the RFP**,** the rate quoted by the Consultant shall be increased/ decreased in the same proportion in which the length of the project is increased/decreased beyond 10%. The maximum payment due to change in scope shall be limited to 25% of the contract value

iii) The stipulated period of completion of services may be increased / decreased accordingly.

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

SIGNED, SEALED AND DELIVERED	SIGNED, SEALED AND DELIVERED
For and on behalf of Consultant:	For and on behalf of Authority
(Signature)	(Signature)
(Name)	(Name)
(Designation)	(Designation)
(Address)	(Address)
In the presence of:	
1.	2.

Annex-1

Terms of Reference
(Refer Clause 3.1.2)

(Reproduce Schedule-1 of RFP)

Annex-2

Deployment of Personnel
(Refer Clause 4.2)

(Reproduce as per Form-13 of Appendix-I)

Annex-3

Estimate of Personnel Costs

(Refer Clause 4.2)

Annex-4

Approved Sub-Consultant(s)
(Refer Clause 4.7)

(Reproduce as per Form-15 of Appendix-I)

Annex-5

Cost of Services

(Refer Clause 6.1)

(Reproduce as per Form-1 to Form 5 of Appendix-II)

Annex-6

Payment Schedule for DPR Work

(Refer Clause 6.3)

Key Date No.	Description of Deliverables for DPR Work	Days	Payment
KD1	Inception Report including QAP document	10	10%
KD2	Strip Plan	30	10%
KD3	Draft DPR	45	40%
KD4	Detailed Project Report (DPR) and project clearances	60	40%

Notes:

1. *The above payments shall be made to the Consultant provided that the payments to be made at any time shall not exceed the amount certified by the Consultant in its Statement of Expenses.*

2. *All Reports shall first be submitted as draft reports for comments of the Authority. The Authority shall provide its comments no later than 1 (One) week from the date of receiving a draft report and in case no comments are provided within such 1 (One) weeks, the Consultant shall finalise its report. Provided, however, that the Authority may take upto 2 (Two) weeks in providing its comments on the Draft Detailed Project Report.*

3. *Detailed Project Report shall be completed in 2 (Two) months.*

4. *Final payment shall be released upon completion of Services in their entirety, including submission of the Environmental and Social Impact Assessment Report.*

Annex- 7

Bank Guarantee for Performance Security

(Refer Clause 7.1.2)

To

Managing Director
3rd Floor, Sirpur Bhawan Campus, Behind Akashwani, Civil Lines, Raipur (C.G.)
Phone: 0771-4043395
Email: info@cgrdc.in, info.cgrdc@gmail.com

In consideration of Chhattisgarh Road Development Corporation Limited, Raipur C.G. (CGRDC) hereinafter referred as the "**Authority**", which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) awarding to …….., having its office at …….. (hereinafter referred as the "**Consultant**" which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns), vide the Authority's Agreement no. ……. dated …….. valued at Rs. …….. (Rupees ……..), (hereinafter referred to as the "**Agreement**") the assignment for consultancy services in respect of the ……. Project, and the Consultant having agreed to furnish a Bank Guarantee amounting to Rs. …….. (Rupees ……..) to the Authority for performance of the said Agreement.

We, …….. (hereinafter referred to as the "**Bank**") at the request of the Consultant do hereby undertake to pay to the Authority an amount not exceeding Rs. …… (Rupees …….) against any loss or damage caused to or suffered or would be caused to or suffered by the Authority by reason of any breach by the said Consultant of any of the terms or conditions contained in the said Agreement.

2. We, …….. (indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on a demand from the Authority stating that the amount/claimed is due by way of loss or damage caused to or would be caused to or suffered by the Authority by reason of breach by the said Consultant of any of the terms or conditions contained in the said Agreement or by reason of the Consultant's failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs. …….. (Rupees ……..).

3. We, …….. (indicate the name of the Bank) do hereby undertake to pay to the Authority any money so demanded notwithstanding any dispute or disputes raised by the Consultant in any suit or proceeding pending before any court or tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Consultant shall have no claim against us for making such payment.

4. We, …….. (indicate the name of Bank) further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be required for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Authority under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till the Authority certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Consultant and accordingly discharges this Guarantee. Unless a demand or claim under this Guarantee is made on us in writing on or before a

period of one year from the date of this Guarantee, we shall be discharged from all liability under this Guarantee thereafter.

5. We, …… (indicate the name of Bank) further agree with the Authority that the Authority shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said Consultant from time to time or to postpone for any time or from time to time any of the powers exercisable by the Authority against the said Consultant and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Consultant or for any forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said Consultant or any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have the effect of so relieving us.

6. This Guarantee will not be discharged due to the change in the constitution of the Bank or the Consultant(s).

7. We, …….. (indicate the name of Bank) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the Authority in writing.

8. For the avoidance of doubt, the Bank's liability under this Guarantee shall be restricted to Rs. ..... crore (Rupees ..... crore) only. The Bank shall be liable to pay the said amount or any part thereof only if the Authority serves a written claim on the Bank in accordance with Paragraph 2 hereof, on or before [..... (indicate the date falling 365 days after the date of this Guarantee)].

For .....

Name of Bank:

Seal of the Bank:

Dated, the .....day of ....., 20.....

(Signature, name and designation of the authorised signatory)

NOTES:

(i) The Bank Guarantee should contain the name, designation and code number of the officer(s) signing the Guarantee.

(ii) The address, telephone no. and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.

Annex-8

Fortnightly Time Reports

(Refer Clause 9.8.1)

Project Name : Fortnight ending:

Week One from :----------to ---------- (insert dates covered by Week One)

Key Personnel	Hours on site	Hours Off site	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total

Week Two from :----------to ---------- (insert dates covered by Week Two)

Key Personnel	Hours on site	Hours Off site	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total

Provide brief description of work undertaken on each day of the fortnight, below:

Date: (Signature and name of authorised signatory)

Note: Hours on Site include time spent in the office of the Authority or at any place other than the office of the Consultant, as may be necessary for carrying out the assignment.

SCHEDULE-3

Guidance Note on Conflict of Interest

1. This Note further explains and illustrates the provisions of Clause 2.3 of the RFP and shall be read together therewith in dealing with specific cases.

2. Consultants should be deemed to be in a conflict of interest situation if it can be reasonably concluded that their position in a business or their personal interest could improperly influence their judgment in the exercise of their duties. The process for selection of consultants should avoid both actual and perceived conflict of interest.

3. Conflict of interest may arise between the Authority and a consultant or between consultants and present or future concessionaries/ contractors. Some of the situations that would involve conflict of interest are identified below:

   (a) Authority and consultants:

      (i) Potential consultant should not be privy to information from the Authority which is not available to others;

      (ii) potential consultant should not have defined the project when earlier working for the Authority;

      (iii) potential consultant should not have recently worked for the Authority overseeing the project.

   (b) Consultants and concessionaires/contractors:

      (i) No consultant should have an ownership interest or a continuing business interest or an on-going relationship with a potential concessionaire/ contractor save and except relationships restricted to project-specific and short-term assignments; or

      (ii) no consultant should be involved in owning or operating entities resulting from the project; or

      (iii) no consultant should bid for works arising from the project.

   The participation of companies that may be involved as investors or consumers and officials of the Authority who have current or recent connections to the companies involved, therefore, needs to be avoided.

4. The normal way to identify conflicts of interest is through self-declaration by consultants. Where a conflict exists, which has not been declared, competing companies are likely to bring this to the notice of the Authority. All conflicts must be declared as and when the consultants become aware of them.

5. Another approach towards avoiding a conflict of interest is through the use of "Chinese walls" to avoid the flow of commercially sensitive information from one part of the consultant's company to another. This could help overcome the problem of availability of

limited numbers of experts for the project. However, in reality effective operation of "Chinese walls" may be a difficult proposition. As a general rule, larger companies will be more capable of adopting Chinese walls approach than smaller companies. Although, "Chinese walls" have been relatively common for many years, they are an increasingly discredited means of avoiding conflicts of interest and should be considered with caution. As a rule, "Chinese walls" should be considered as unacceptable and may be accepted only in exceptional cases upon full disclosure by a consultant coupled with provision of safeguards to the satisfaction of the Authority.

6. Another way to avoid conflicts of interest is through the appropriate grouping of tasks. For example, conflicts may arise if consultants drawing up the terms of reference or the proposed documentation are also eligible for the consequent assignment or project.

7. Another form of conflict of interest called "scope–creep" arises when consultants advocate either an unnecessary broadening of the terms of reference or make recommendations which are not in the best interests of the Authority but which will generate further work for the consultants. Some forms of contractual arrangements are more likely to lead to scope-creep. For example, lump-sum contracts provide fewer incentives for this, while time and material contracts provide built in incentives for consultants to extend the length of their assignment.

8. Every project contains potential conflicts of interest. Consultants should not only avoid any conflict of interest, they should report any present/ potential conflict of interest to the Authority at the earliest. Officials of the Authority involved in development of a project shall be responsible for identifying and resolving any conflicts of interest. It should be ensured that safeguards are in place to preserve fair and open competition and measures should be taken to eliminate any conflict of interest arising at any stage in the process.

APPENDICES

APPENDIX-I
Form-1
Technical Proposal

Letter of Proposal
(On Applicant's letter head)

(Date and Reference)

To,

Managing Director
3rd Floor, Sirpur Bhawan Campus, Behind Akashwani, Civil Lines, Raipur (C.G.)
Phone: 0771-4043395
Email: info@cgrdc.in, info.cgrdc@gmail.com

Sub: **Appointment of Consultant for "Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track"**

Dear Sir,

With reference to your RFP Document dated …….., I/we, having examined all relevant documents and understood their contents, hereby submit our Proposal for selection as Consultant for the " Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track ". The proposal is unconditional and unqualified.

2. All information provided in the Proposal and in the Appendices is true and correct and all documents accompanying such Proposal are true copies of their respective originals.

3. This statement is made for the express purpose of appointment as the Consultant for the aforesaid Project.

4. I/We shall make available to the Authority any additional information it may deem necessary or require for supplementing or authenticating the Proposal.

5. I/We acknowledge the right of the Authority to reject our application without assigning any reason or otherwise and hereby waive our right to challenge the same on any account whatsoever.

6. I/We certify that in the last three years, we or any of our Associates have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Applicant, nor been expelled from any project or contract by any public authority nor have had any contract terminated by any public authority for breach on our part.

7. I/We declare that:

(a) I/We have examined and have no reservations to the RFP Documents, including any Addendum issued by the Authority;

(b) I/We do not have any Conflict of Interest in accordance with Clause 2.3 of the RFP Document;

(c) I/We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as defined in Clause 4.3 of the RFP document, in respect of any tender or request for proposal issued by or any agreement entered into with the Authority or any other public sector enterprise or any government, Central or State; and

(d) I/We hereby certify that we have taken steps to ensure that in conformity with the provisions of Section 4 of the RFP, no person acting for us or on our behalf will engage in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

8. I/We understand that you may cancel the Selection Process at any time and that you are neither bound to accept any Proposal that you may receive nor to select the Consultant, without incurring any liability to the Applicants in accordance with Clause 2.8 of the RFP document.

9. I/We certify that in regard to matters other than security and integrity of the country, we or any of our Associates have not been convicted by a Court of Law or indicted or adverse orders passed by a regulatory authority which would cast a doubt on our ability to undertake the Consultancy for the Project or which relates to a grave offence that outrages the moral sense of the community.

10. I/We further certify that in regard to matters relating to security and integrity of the country, we have not been charge-sheeted by any agency of the Government or convicted by a Court of Law for any offence committed by us or by any of our Associates.

11. I/We further certify that no investigation by a regulatory authority is pending either against us or against our Associates or against our CEO or any of our Directors/Managers/employees.[$]

12. I/We hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Authority and/ or the Government of Chhattisgarh / India in connection with the selection of Consultant or in connection with the Selection Process itself in respect of the above mentioned Project.

[$] In case the Applicant is unable to provide the certification specified in Paragraph 12, it may precede the Paragraph by the words viz. "Except as specified in Schedule ……..... hereto". The exceptions to the certification or any disclosures relating thereto may be clearly stated in a Schedule to be attached to the Application. The Authority will consider the contents of such Schedule and determine whether or not the exceptions/disclosures are material to the suitability of the Applicant for pre-qualification hereunder.

13. The Bid Security of Rs. ..... (Rupees .....) in the form of a Demand Draft is attached, in accordance with the RFP document.

14. I/We agree and understand that the proposal is subject to the provisions of the RFP document. In no case, shall I/we have any claim or right of whatsoever nature if the Consultancy for the Project is not awarded to me/us or our proposal is not opened or rejected.

15. I/We agree to keep this offer valid for 120 (One Twenty) days from the Proposal Due Date specified in the RFP.

16. A Power of Attorney in favour of the authorised signatory to sign and submit this Proposal and documents is attached herewith in Form-4.

17. In the event of being selected as the Consultant, I/we agree to enter into an Agreement in accordance with the form at Schedule–2 of the RFP. We agree not to seek any changes in the aforesaid form and agree to abide by the same.

18. I/We have studied RFP and all other documents carefully and also surveyed the Project site. We understand that except to the extent as expressly set forth in the Agreement, we shall have no claim, right or title arising out of any documents or information provided to us by the Authority or in respect of any matter arising out of or concerning or relating to the Selection Process including the award of Consultancy.

19. The Financial Proposal is being submitted in a separate cover. This Technical Proposal read with the Financial Proposal shall constitute the Application which shall be binding on us.

20 I/We agree and undertake to abide by all the terms and conditions of the RFP Document. In witness thereof, I/we submit this Proposal under and in accordance with the terms of the RFP Document.

Yours faithfully,

(Signature, name and designation of the authorised signatory)
(Name and seal of the Applicant)

APPENDIX-I

Form-2

Particulars of the Applicant

1.1	Title of Consultancy: Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track
1.2	Title of Project: Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track
1.3	State the following: Name of Company or Firm: Legal status (e.g. incorporated private company, unincorporated business, partnership etc.): Country of incorporation: Registered address: Year of Incorporation: Year of commencement of business: Principal place of business: Brief description of the Company including details of its main lines of business Name, designation, address and phone numbers of authorised signatory of the Applicant: Name: Designation: Company: Address: Phone No.: E-mail address:
1.4	For the Applicant state the following information: (i) In case of non Indian Firm, does the Firm have business presence in India? Yes/No If so, provide the office address(es) in India. (ii) Has the Applicant been penalized by any organization for poor

	quality of work or breach of contract in the last five years? Yes/No (iii) Has the Applicant ever failed to complete any work awarded to it by any public authority/ entity in last five years? Yes/No (iv) Has the Applicant been blacklisted by any Government department/Public Sector Undertaking in the last five years? Yes/No (v) Has the Applicant suffered bankruptcy/insolvency in the last five years? Yes/No **Note: If answer to any of the questions at (ii) to (v) is yes, the Applicant is not eligible for this consultancy assignment.**
1.5	Does the Applicant's firm/company combine functions as a consultant or adviser along with the functions as a contractor and/or a manufacturer? Yes/No If yes, does the Applicant agree to limit the Applicant's role only to that of a consultant/ adviser to the Authority and to disqualify themselves, their Associates/ affiliates, subsidiaries and/or parent organization subsequently from work on this Project in any other capacity? Yes/No
1.6	Does the Applicant intend to borrow or hire temporarily, personnel from contractors, manufacturers or suppliers for performance of the Consulting Services? Yes/No If yes, does the Applicant agree that it will only be acceptable as Consultant, if those contractors, manufacturers and suppliers disqualify themselves from subsequent execution of work on this Project (including tendering relating to any goods or services for any other part of the Project) other than that of the Consultant? Yes/No If yes, have any undertakings been obtained (and annexed) from such contractors, manufacturers, etc. that they agree to disqualify themselves from subsequent execution of work on this Project and they agree to limit their role to that of consultant/ adviser for the Authority only? Yes/No (Signature, name and designation of the authorised signatory) For and on behalf of ……..

APPENDIX-I
Form-3
Statement of Legal Capacity

(To be forwarded on the letter head of the Applicant)

Ref. Date:

To,

Managing Director
3rd Floor, Sirpur Bhawan Campus, Behind Akashwani, Civil Lines, Raipur (C.G.)
Phone: 0771-4043395
Email: info@cgrdc.in, info.cgrdc@gmail.com

Sub: "Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track"

Dear Sir,

I/We hereby confirm that we, the Applicant satisfy the terms and conditions laid down in the RFP document.

I/We have agreed that …….. (insert individual's name) will act as our Authorised Representative and has been duly authorized to submit our Proposal. Further, the authorised signatory is vested with requisite powers to furnish such proposal and all other documents, information or communication and authenticate the same.

Yours faithfully,

(Signature, name and designation of the authorised signatory)
For and on behalf of .....

APPENDIX-I

Form-4

Power of Attorney

Know all men by these presents, we, ... (name of Firm and address of the registered office) do hereby constitute, nominate, appoint and authorise Mr / Ms..... son/daughter/wife and presently residing at .....**,** who is presently employed with us and holding the position of ..... as our true and lawful attorney (hereinafter referred to as the "**Authorised Representative**") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our Proposal for and selection as the Consultant for Preparation of Feasibility Report for the ..... Project**,** proposed to be developed by the ..... (the "**Authority**") including but not limited to signing and submission of all applications, proposals and other documents and writings, participating in pre-proposal and other conferences and providing information/ responses to the Authority, representing us in all matters before the Authority, signing and execution of all contracts and undertakings consequent to acceptance of our proposal and generally dealing with the Authority in all matters in connection with or relating to or arising out of our Proposal for the said Project and/or upon award thereof to us till the entering into of the Agreement with the Authority.

AND, we do hereby agree to ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Authorised Representative pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Authorised Representative in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, ... THE ABOVE NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS ..... DAY OF ....., 20.....

For .....

(Signature, name, designation and address)

Witnesses:
1.
2.
Notarised

Accepted

.....

(Signature, name, designation and address of the Attorney)

Notes:

- *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure. The Power of Attorney should be executed on a non-judicial stamp paper of Rs. 100 (hundred) and duly notarised by a notary public.*

- *Wherever required, the Applicant should submit for verification the extract of the charter documents and other documents such as a resolution/power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Applicant.*

- *For a Power of Attorney executed and issued overseas, the document will also have to be legalised by the Indian Embassy and notarised in the jurisdiction where the Power of Attorney is being issued. However, Applicants from countries that have signed the Hague Legislation Convention 1961 need not get their Power of Attorney legalised by the Indian Embassy if it carries a conforming Apostille certificate.*

APPENDIX-I
Form-5
Financial Capacity of the Applicant

S. No.	Financial Year	Annual Turn Over (INR)
1.		
2.		
3.		

Certificate from the Statutory Auditor[$]

This is to certify that ..... (name of the Applicant) has received the payments shown above against the respective years on account of professional fees.

Name of the audit firm:

Seal of the audit firm

Date:

(Signature, name and designation of the Statutory Auditor)

[$] In case the Applicant does not have a statutory auditor, it shall provide the certificate from its chartered accountant that ordinarily audits the annual accounts of the Applicant.

Note: Please do not attach any printed Annual Financial Statement.

APPENDIX-1
Form -6
Particulars of Key Personnels

Designation of Key Personnel	Name	Educational Qualification	Length of Professional Experience	Present Employment		No. of Eligible Assignments (Refer Form-9 of Appendix-1)
				Name of Firm	Employed Since	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Team Leader Cum Senior Highway Engineer 2. Bridge/Structural Engineer 3. Pavement Design / Traffic Engineer 4. Senior Survey Engineer 5. Quantity Surveyor/Documentation Expert 6. Material Engineer cum Geotechnical Engineer / Expert 7. Environmental and Social R&R Expert 8. Land Acquisition Expert	Team Leader Cum Real Estate Expert					

APPENDIX-I

Form-7

Proposed Methodology and Work Plan

The proposed methodology and work plan shall be described as follows:

1. Understanding of TOR (not more than two pages)

   The Applicant shall clearly state its understanding of the TOR and also highlight its important aspects. The Applicant may supplement various requirements of the TOR and also make precise suggestions if it considers this would bring more clarity and assist in achieving the Objectives laid down in the TOR.

2. Methodology and Work Plan (not more than three pages)

   The Applicant will submit its methodology for carrying out this assignment, outlining its approach toward achieving the Objectives laid down in the TOR. The Applicant will submit a brief write up on its proposed team and organisation of personnel explaining how different areas of expertise needed for this assignment have been fully covered by its proposal. The Applicant should specify the sequence and locations of important activities, and provide a quality assurance plan for carrying out the Consultancy Services.

Note: Marks will be deducted for writing lengthy and out of context responses.

APPENDIX-I

Form-8

Abstract of Eligible Assignments of the Applicants

S.No	Name of Project	Name of Client	Estimated capital cost of Project (in INR crore)	Length of the project in Km	Payment[$$] of professional fees received by the Applicant (INR crore)
(1)[£]	(2)	(3)	(4)		(5)
1					
2					
3					
4					

[$] The Applicant should provide details of only those projects that have been undertaken by it under its own name in India.

[$$] Exchange rate for conversion of US $ shall be as per Clause 1.7.1.

[£] The names and chronology of Eligible Projects included here should conform to the project-wise details submitted in Form-10 of Appendix-I.

Signature, name and designation of the authorized signatory of Applicant

Certificate from the Statutory Auditor[$]

This is to certify that the information contained in Column 5 above is correct as per the accounts of the Applicant and/ or the clients.

Name of the audit firm:

Seal of the audit firm

Date:

(Signature, name and designation of the authorised signatory)

[$] In case the Applicant does not have a statutory auditor, it shall provide the certificate from its chartered accountant that ordinarily audits the annual accounts of the Applicant.

Note: The Applicant may attach separate sheets to provide brief particulars of other relevant experience of the Applicant.

APPENDIX-I

Form-9

Abstract of Eligible Assignments of Key Personnels

Name of Key Personnel: Designation:

S.No	Name of Project[$]	Name of Client	Estimated capital cost of project (in INR crore)	Name of firm for which the Key Personnel worked	Designation of the Key Personnel on the assignment	Date of completion of the assignment	Man days spent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

[$] Use separate Form for each Key Personnel.

[$$] The names and chronology of projects included here should conform to the project-wise details submitted in Form-11 of Appendix-I.

Note: The Applicant may attach separate sheets to provide brief particulars of other relevant experience of the Key Personnel.

APPENDIX-I

Form-10

Eligible Assignments of Applicant

1.	Name of Applicant:	
2.	Name of the Project:	
3.	Length in km or other particulars	
4.	Description of services performed by the Applicant Firm:	
5.	Name of client and Address: (indicate whether public or private)	
6.	Name and telephone no. of client's representative:	
7.	Estimated capital cost of the Project (in INR crore):	
8.	Payment received by the Applicant (in INR crore):	
9.	Start date of the services (month/ year):	
10.	Finish date of the services (month/ year):	
11.	Brief description of the Project:	
It is certified that the aforesaid information is true and correct to the best of my knowledge and belief. (Signature, name and designation of authorized signatory)		

Notes:

1. Use separate sheet for each Eligible Project.

2. The Applicant may attach separate sheets to provide brief particulars of other relevant experience of the Applicant.

3. Exchange rate for conversion of US $ shall be as per Clause 1.7.1.

APPENDIX-I

Form-11

Eligible Assignments of Key Personnel

1.	Name of Key Personnel:	
2.	Designation of Key Personnel:	
3.	Name of the Project:	
4.	Length in km or other particulars	
5.	Name of Consulting Firm where employed:	
6.	Description of services performed by the Key Personnel (including designation):	
7.	Name of client and Address: (indicate whether public or private)	
8.	Name and telephone no. of client's representative:	
9.	Estimated capital cost of the Project (in INR crore):	
10.	Start date of the services (month/ year):	
11.	Finish date of the services (month/ year):	
12.	Brief description of the Project:	
It is certified that the aforesaid information is true and correct to the best of my knowledge and belief. (Signature and name of Key Personnel)		

Notes:

1. Use separate sheet for each Eligible Project.

2. The Applicant may attach separate sheets to provide brief particulars of other relevant experience of the Key Personnel.

3. Exchange rate for conversion of US $ shall be as per Clause 1.7.1.

APPENDIX-I

Form-12

Curriculum Vitae (CV) of Key Personnel

1. Proposed Position:

2. Name of Personnel:

3. Date of Birth:

4. Nationality:

5. Educational Qualifications:

6. Employment Record:

(Starting with present position, list in reverse order every employment held.)

Latest Coloured Photograph to be affixed

7. List of projects on which the Personnel has worked

Name of project	Description of responsibilities

8. Details of the current assignment and the time duration for which services are required for the current assignment.

Certification:

1 I am willing to work on the Project and I will be available for entire duration of the Project assignment as required.

2 I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications and my experience.

(Signature and name of the Key Personnel)

Place.....

(Signature and name of the authorised signatory of the Applicant)

Notes:

1. Use separate form for each Key Personnel

2. The names and chronology of assignments included here should conform to the project-wise details submitted in Form-8 of Appendix-I.

3. Each page of the CV shall be signed in ink and dated by both the Personnel concerned and by the Authorised Representative of the Applicant firm along with the seal of the firm. Photocopies will not be considered for evaluation.

4. Along with CV the applicant should submit the certificates of Educational qualification, date of birth and experience certificates

APPENDIX-I

Form - 13

Deployment of Personnel

S.No.	Designation	Name	Man Days (MD)		Week Numbers										
			At Project site	Away from Project site (specify)	1	2	3	4	5	6	7	8	9		
1.															
2.															
3.															
4.															
5.															
6.															
7.															
Total Man days															

APPENDIX-I

Form–14

Survey and Field Investigations

Item of Work/ Activity	To be carried out/ prepared by		Week										
	Name	Designation	1	2	3	4	5	6	7	8	9		

APPENDIX-I

Form-15

Proposal for Sub-Consultant(s)

1. Details of the Firm				
Firm's Name, Address and Telephone				
Name and Telephone No. of the Contact Person				
Fields of Expertise				
No. of Years in business in the above Fields				
2. Services that are proposed to be sub contracted:				
3. Person who will lead the Sub- Consultant Name: Designation: Telephone No: Email:				
4. Details of Firm's previous experience				
Name of Work	Name, address and telephone no. of Client	Total Value of Services Performed	Duration of Services	Date of Completion of Services
1. 2. 3.				

(Signature and name of the authorised signatory)

Note:

1. The Proposal for Sub-Consultant(s) shall be accompanied by the details specified in Forms 12 and 13 of Appendix –I.

2. Use separate form for each Sub-Consultant

APPENDIX-II
FINANCIAL PROPOSAL

FORM-1
Covering Letter
(On Applicant's letter head)

(Date and Reference)

To,

Managing Director
3rd Floor, Sirpur Bhawan Campus, Behind Akashwani, Civil Lines, Raipur (C.G.)
Phone: 0771-4043395
Email: info@cgrdc.in, info.cgrdc@gmail.com

Subject: Appointment of Consultant for "Preparation of Detailed Project Report (DPR) and Project Management Consultancy (PMC) for Construction of Road / Expressway with BRTS Corridor on Existing Fafadih - Telibandha - Naya Raipur Narrow Gauge Railway Track"

Dear Sir,

We, the undersigned, offer to provide the consulting services for the above in accordance with your Request for Proposal dated …… and our proposal. Our attached financial proposal is for the sum of Rs…… [Amount in words and figures]. This amount is inclusive of all the taxes except Service tax which we have estimated at Rs……(Amount in Words and Figures).

Our financial proposal shall be binding upon us subject to the modifications resulting from contract negotiations, up to the expiration of the validity period of the proposal, i.e……., [Date].

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

I/We agree that this offer shall remain valid for a period of 120 (One Twenty) days from the Proposal Due Date or such further period as may be mutually agreed upon.

Yours faithfully,

(Signature, name and designation of the authorised signatory)

Note: The Financial Proposal is to be submitted strictly as per forms given in the RFP.

APPENDIX-II
FINANCIAL PROPOSAL

FORM-2
Total Consultancy Fee

Name of the Consultancy Assignment	Cost For Preparation of DPR, Bid Documents, etc. as per Form - 3	Cost For PMC Works as per Form - 4	Total Cost For the Package
(1)	(2)	(3)	(4) = (2)+(3)

Notes:

1. Payments will be made as per stipulations of the Agreement
2. In case of discrepancy in the price mentioned in the figures and words, the price quoted in words would be considered as final.
3. Price to be quoted including all taxes but excluding Service Tax.
4. All the cuttings and overwriting (if any) shall be clearly initialled.
5. Payments will be made as per stipulations of the Agreement.
6. No condition should be attached to the price proposal.

Managing Director/Head of the firm
/Authorized Representative of the firm

Name of the firm

Address

APPENDIX-II
FINANCIAL PROPOSAL

FORM-3
Consultancy Fee for DPR Works

S. No.	Description of Activity	Approx. Qty (length In Figures)	Unit	Rate (in INR)		Amount (in INR)
				In Figures	In Words	
(1)	(2)	(3)	(4)	(5)	(6)	(7) = (3) x (5)
1	Preparation of DPR and Bid Document	22	Km			
TOTAL AMOUNT						

Total Amount in Words	

Notes:

1. Payments will be made as per stipulations of the Agreement
2. In case of discrepancy in the price mentioned in the figures and words, the price quoted in words would be considered as final.
3. Price to be quoted including all taxes but excluding Service Tax.
4. All the cuttings and overwriting (if any) shall be clearly initialled.
5. Payments will be made as per stipulations of the Agreement.
6. No condition should be attached to the price proposal.

Managing Director/Head of the firm
/Authorized Representative of the firm

Name of the firm

Address

APPENDIX-II
FINANCIAL PROPOSAL

FORM-4
Consultancy Fee for PMC Works

S.No	Description	Amount (INR)	Remarks
1	Remuneration for Professional & Sub professional staff		
2	Office Staff		
3	Out of Pocket expenses		
Total Amount for PMC Work			

Notes:

1. Payments will be made as per stipulations of the Agreement
2. In case of discrepancy in the price mentioned in the figures and words, the price quoted in words would be considered as final.
3. Price to be quoted including all taxes but excluding Service Tax.
4. All the cuttings and overwriting (if any) shall be clearly initialled.
5. Payments will be made as per stipulations of the Agreement.
6. No condition should be attached to the price proposal.

Managing Director/Head of the firm
/Authorized Representative of the firm

Name of the firm

Address

APPENDIX-II
FINANCIAL PROPOSAL

FORM-5
Breakdown of Local Currency Cost

I. Remuneration for Local Professional Staffs

S.No	Position	Name*	Year 1-2		
			Rate	No. of Man	Amount
Key Personnel (Professional Staff)					
1	Team Leader Cum Senior Highway Engineer			18	
2	Pavement Engineer			18	
3	Senior Quality Cum Material			18	
4	Bridge/Structural Engineer			18	
5	Senior Quantity Surveyor			18	
6	Sr. Contract Specialist			6	
7	CAD Expert			6	
	Sub Total			**102**	
Sub-Professional					
1	Quantity Surveyor			1 X18	
2	Survey Engineer			1X18	
3	Lab Technician			2X18	
4	Field Engineer			2X18	
	Sub Total			**108**	
	Grand Total			**210**	

*All positions to be named.

II. Remuneration for Office Staff

S.No	Name of Position	Name	Rate	No. of Man Month	Amount
1	Office manager cum Accountant			1x18	
2	Computer Operator			2x18	
3	Peon			1x18	
4	Night Watchman			1x18	
	Total			90	

Note : No extra payment shall be made on any account other than above.

III. Out of pocket expenses

S.No	Particulars	Charge/Month	Consulting Period	Amount
1	Car Rentals		2x18	
2	Motor Cycle/Bike Rental (for sub key staff)		2X 18	
3	Office Stationary , Printing Charges i/c misc. cost for computer, printer, photo copies		1X18	
4	Communication (TEL/Fax/Postage etc)		1X18	
5	Office Accommodation including furnishing		1X18	
	Total			

Managing Director/Head of the firm
/Authorized Representative of the firm

Name of the firm

Address