



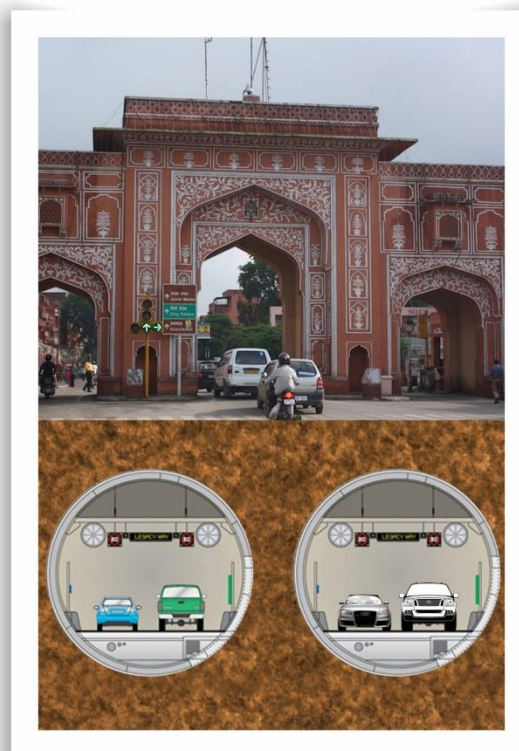
JAIPUR SMART CITY LTD.

INVITATION FOR BID

Bid Reference No.
JSCL/Smart City Works/13/2017-18

RFP for

**Consultancy Services for Preparation of
DPR for Tunnel/ Subway from
Sanganeri Gate to Jorawar Singh Gate**

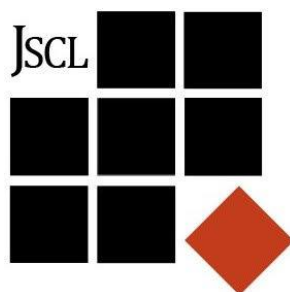


October - 2017

Jaipur Smart City Limited

JMC Building, Pt. Deendayal Upadhyay Bhawan,
Lal Kothi, Tonk Road, Jaipur-302016
Phone No. 0141-2741346/2741347,
E-Mail ID: jscljaipur@gmail.com

Jaipur Smart City Limited



INVITATION FOR BID (IFB)

Bid Reference No. JSCl/Smart City Works/13/2017-18

RFP for

**Consultancy Services for Preparation of DPR for
Tunnel/ Subway from Sanganeri Gate to Jorawar
Singh Gate**

October - 2017

Jaipur Smart City Limited

JMC Building, Pt. Deendayal Upadhyay Bhawan, Lal Kothi, Tonk Road, Jaipur-302016
Phone No. 0141-2741346/2741347, E-Mail ID: jscljaipur@gmail.com

Procurement of Consultancy Services (Lump Sum Contracts)

Request for Proposal (RFP)

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Jaipur Smart City Limited

JMC Building, Pt DeendayalUpadhyay Bhawan,
LalKothi, Tonk Road, Jaipur – 302016E-Mail ID: jslcjaipur@gmail.com

NOTICE INVITING TENDER

Bid Reference No. JSCL/Smart City Works/13/2017-18

Jaipur Smart City Limited (ISCL). Jaipur invites online e-bids from reputed Consulting firms who have experience in Preparation of Detailed Project Reports for Tunnel / Subway projects for the following work.

Name of Work	Estimated Consultancy Fees	Earnest Money deposit(Rs.)	Tender document Fee	Bid processing fee	Period of Completion
Consultancy Services for Preparation of DPR for Tunnel/Subway from Sanganeri Gate to Jorawar Singh Gate	Rs. 3.3 Crores	Rs. 6.6 lakhs (Rupees Six lakhs and Sixty thousand only)	Rs. 20,000 (Rupees Twenty Thousand Only)	Rs. 1000 (Rupees One Thousand Only)	12 months (twelve months)

SALIENT DATES:

(i)	Bid document Downloading and submission Start Date and time	October 16, 2017 at 5:00 pm
(ii)	Bid document Downloading End Date and time	November 24, 2017 upto 5 :00 PM
(iii)	Pre-bid Meeting	October 25, 2017 at 11:00 AM
(iv)	Venue of Pre-bid meeting	Jaipur Smart City Limited JMC Building, Pt Deendayal Upadhyay Bhawan, Lal Kothi, Tonk Road, Jaipur – 302016
(v)	Last date and time of Online submission of technical proposal and financial proposal	November 24, 2017 upto5:00 PM
(vi)	Last date and time of Physical submission of EMD, bid document fee Bid processing fee & Power of Attorney	November 25, 2017, Upto 5:00 PM
(vii)	Opening of bid online (Technical proposal only)	November 27, 2017 at 3:00 PM

Terms:

- This notice and bid documents are available on following internet site address for e tender www.eproc.rajasthan.gov.in or <http://sppp.rajasthan.gov.in>
- A complete set of bid documents can be downloaded from above websites.
- Bids shall remain valid for 120 days (one hundred and twenty days) from the date of submission of the bid
- Any bid not accompanied by Bid document fee, Bid processing fee and Earnest Money as in the NIT will be rejected as nonresponsive.
- Complete e-Tender must be submitted on-line on www.eproc.rajasthan.gov.in
- Any addendum, clarification to the bidder's queries and corrigendum will be published on the www.eproc.rajasthan.gov.in or <http://sppp.rajasthan.gov.in> and will not be published in the Newspapers.
- Demand draft of EMD and Bid Cost are to be submitted in favour of Chief Executive Officer, Jaipur Smart City Limited, Jaipur & Bid Processing fee in favour of Managing Director, RISL, Jaipur.

**Chief Executive Officer
Jaipur Smart City Limit**

Section I: Instruction to Consultants

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Important Instruction:- The Law relating to procurement “The Rajasthan Transparency in Public Procurement Act, 2012” [hereinafter called the Act] and the “Rajasthan Public Procurement Rules, 2013” [hereinafter called the Rules] under the said Act have come into force which are available on the website of State Public Procurement Portal <http://sppp.rajasthan.gov.in> Therefore, the Consultants are advised to acquaint themselves with the provisions of the Act and the Rules before participating in the procurement process. If there is any discrepancy between the provisions of the Act and the Rules and this Request for Proposals Document, the provisions of the Act and the Rules shall prevail.

1. Definitions			
S.No	Particulars	Clause	Description
1.1		1.1.1	“Act” means the Rajasthan Transparency in Public Procurement Act, 2012.
		1.1.2	“Proposal Data Sheet (BDS)” means such part of the Instructions to Consultants used to reflect specific assignment conditions.
		1.1.3	“Client” means the Procuring Entity with which the selected Consultant signs the Contract for the Services.
		1.1.4	“Consultant” means the Consultants who may be any entity or person including any Sub-Consultant and other personnel who may provide the Services to the Client under the Contract.
		1.1.5	“Contract” means the Contract signed by the Parties and all the attached documents and the appendices.
		1.1.6	“Day” means a calendar day.
		1.1.7	“Government” means the Government of Rajasthan.
		1.1.8	“Instructions to Consultants (ITC)” means the document which provides information needed to prepare their Proposals.
		1.1.9	“Personnel” means professionals and support staff provided by the Consultant or by any Sub-Consultant and assigned to perform the Services or any part thereof; “Foreign Personnel” means such professionals and support staff who at the time of

			being so provided had their domicile outside India; "Local Personnel" means such professionals and support staff who at the time of being so provided had their domicile inside India.
		1.1.11	"Proposal" means the Technical Proposal and the Financial Proposal submitted by the Consultant.
		1.1.12	"RFP" means the Request For Proposals prepared by the Client for the selection of Consultants.
		1.1.13	"Rules" means the Rajasthan Transparency in Public Procurement Rules, 2013.
		1.1.14	"Services" means the work to be performed by the Consultant pursuant to the Contract.
		1.1.15	"Sub-Consultants" means any person or entity to whom the Consultant, with the approval of the Client, subcontracts any part of the Services while remaining solely liable for the execution of the Contract.
		1.1.16	"Terms of Reference" (TOR) means the document included in the RFP which explains the objectives, scope of work, activities, tasks to be performed, respective responsibilities of the Client and the Consultant, and expected results and deliverables of the assignment.
S. No	Particulars	Clause	Description
2. Introduction			
2.1		2.1.1	The Client named in the Proposal Data Sheet will select a consulting firm/organisation (the Consultant) in accordance with the method of selection specified in the Proposal Data Sheet.
		2.1.2	This RFP consists of the following documents: Section I: Instruction to Consultants (ITC) Section II: Proposal Data Sheet (BDS) Section III: Proposal Loading Forms Section IV: Terms of Reference (TOR) Section VA: General Conditions of Contract Section VB: Special Conditions of Contract Section VC: Contract Forms

		2.1.3	<p>Consultants are invited to submit a Technical Proposal and a Financial Proposal, or a Technical Proposal only, as specified in the Proposal Data Sheet, for consulting services required for the assignment named in the Proposal Data Sheet.</p> <p>The Proposal will be the basis for contract negotiations and ultimately for a signed Contract with the selected Consultant.</p>
		2.1.4	<p>Consultants should familiarize themselves with local conditions and take them into account in preparing their Proposals. To obtain first-hand information on the assignment and local conditions, Consultants are encouraged to visit the Client before submitting a proposal and to attend a pre-proposal conference if one is specified in the Proposal Data Sheet. Attending the pre-proposal conference is optional. Consultants should contact the Client's representative named in the Proposal Data Sheet to arrange for their visit or to obtain additional information on the pre-proposal conference. Consultants should ensure that these officials are advised of the visit in adequate time to allow them to make appropriate arrangements. Consultants will bear all the expenses related to their visit.</p>
		2.1.5	<p>The Client will timely provide at no cost to the Consultants the inputs and facilities specified in the Proposal Data Sheet, and make available relevant project data and reports.</p>
		2. 1.6	<p>Consultants shall bear all costs associated with the preparation and submission of their proposals and contract negotiation. The Client is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to Contract award without assigning any reason and without thereby incurring any liability to the Consultants.</p>
S. No	Particulars	Clause	Description
3 Conflict of Interest etc.			
3.1		3.1.1	<p>In addition to the provisions of Rule 81, the Procuring Entity requires that Consultants provide professional, objective, and impartial advice and at all times hold the Client's interests paramount, strictly avoid conflicts with other assignments or their own corporate interests and act without any consideration for future work.</p>

			<p>for future work.</p> <p>The Consultant shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other employers, or that may place it in a position of not being able to carry out the assignment in the best interests of the Procuring Entity.</p> <p>Without limitation on the generality of the foregoing, Consultant and any of their affiliates, shall be considered to have a conflict of interest and shall not be hired, under any of the circumstances set forth below:</p>
	Conflicting activities	3.1.1.1	<p>A firm that has been engaged by the Client to provide goods, works or services other than consulting services for a project, and any of its affiliates, shall be disqualified from providing consulting services related to those goods, works or services. Conversely, a firm hired to provide consulting services for the preparation or implementation of a project, and any of its affiliates, shall be disqualified from subsequently providing goods, works or non consulting service resulting from or directly related to the firm's consulting services for such preparation or implementation.</p>
	Conflicting assignments	3.1.1.2	<p>Consultant (including its Personnel and Sub-Consultants) or any of its affiliates shall not be hired for any assignment that, by its nature, may be in conflict with another assignment of the Consultant to be executed for the same or for another Client. For example, a Consultant hired to prepare engineering design for an infrastructure project shall not be engaged to prepare an independent environmental assessment for the same project, and a Consultant assisting a Client in the privatization of public assets shall not purchase, nor advise purchasers of, such assets. Similarly, a Consultant hired to prepare Terms of Reference for an assignment should not be hired for the assignment in question.</p>

	Conflicting relationships	3.1.1.3	A Consultant (including its Personnel and Sub-Consultants) that has a business or family relationship with a member of the Client's staff who is directly or indirectly involved in any part of (i) the
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			preparation of the Terms of Reference of the assignment, (ii) the selection process for such assignment, or (iii) supervision of the Contract, may not be awarded a Contract.
		3.1.2	Consultants have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Client, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Consultant or the termination of its Contract.
		3.1.3	No agency or current employees of the Client shall work as Consultant under their own organization. Recruiting former employees of the Client to work for their former organization is acceptable subject to compliance of requirements of respective service rules and provided no conflict of interest exists. When the Consultant nominates any serving government employee as Personnel in their technical proposal, such Personnel must have written certification from their government or employer confirming that they are on leave without pay from their official position and allowed to work full-time outside of their previous official position. Such certification shall be provided to the Client by the Consultant as part of his technical proposal.
	Unfair Advantage	3.1.4	If a Consultant could derive a competitive advantage from having provided consulting services related to the assignment in question, the Client shall make available to all the Consultants together with this RFP all information that would in that respect give such Consultant any competitive advantage over competing Consultants.
	Code of Integrity	3.1.5.1	The Consultants and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Any person participating in the procurement process shall,- (a) not offer any bribe, reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to

			<p>otherwise influence the procurement process;</p> <ul style="list-style-type: none"> i. not misrepresent or omit that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation; i. not indulge in any collusion, proposal rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process; ii. not misuse any information shared between the procuring Entity and the Consultants with an intent to gain unfair advantage in the procurement process; v. not indulge in any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the procurement process; v. not obstruct any investigation or audit of a procurement process; vi. disclose conflict of interest, if any; and ii. disclose any previous transgressions with any Entity in India or any other country during the last three years or any debarment by any other procuring Entity.
	Breach of Code of Integrity by the Consultants	3.1.5.2	<p>The Procuring Entity shall, notwithstanding anything to the contrary contained in this RFP, reject a Proposal without being liable in any manner whatsoever to the Consultant, if it determines that the Consultant has, directly or indirectly or through an agent, has breached any provision of the Code of Integrity as stated in ITC Sub-Clause 3.1.5.1 or has engaged in any corrupt, fraudulent, coercive, undesirable or restrictive practices in the selection process. In such an event, the Procuring Entity shall, without prejudice to its any other rights or remedies under section 11(3), 46 and Chapter IV of the Act, forfeit and appropriate the Proposal Security or any other Security as genuine pre-estimated compensation and damages payable to the Procuring Entity for, inter alia, time, cost and effort of the Procuring Entity in regard to the proposal, including consideration and evaluation of such Consultant's Proposal.</p>
		3.1.5.3	<p>Consultants shall furnish information on commissions and gratuities, if any, paid or to be paid to agents relating to this proposal and during execution of the</p>

			assignment if the Consultant is awarded the Contract.
3.2	Eligibility	3.2.1	<p>A Consultant may be a natural person, private Entity, government-owned Entity or, where permitted in the Proposal Loading Document, any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture [JV], Consortium or Association. In the case of a Joint Venture, Consortium or Association: -</p> <p>(a) all parties to the Joint Venture, Consortium or Association shall sign the Proposal and they shall be jointly and severally liable; and</p> <p>(b) a Joint Venture, Consortium or Association shall nominate a representative who shall have the authority to conduct all business for and on behalf of any or all the parties of the Joint Venture, Consortium or Association during the proposal loading process. In the event the Proposal of Joint Venture, Consortium or Association is accepted, either they shall form a registered Joint Venture, Consortium or Association as company/ firm etc. or otherwise all the parties to Joint Venture, Consortium or Association shall sign the Agreement.</p>
		3.2.2	<p>A Consultant, and all parties constituting the Consultant, shall have the nationality of India. In case of International Competitive Proposal loading or Joint Venture, Consortium or Association [where permitted], the nationality of the Consultant and all parties constituting the Consultant shall be of India or a country not otherwise declared ineligible by Government of India.</p> <p>A Consultant shall be deemed to have nationality of a country if the Consultant is a citizen or constituted or incorporated, and operates in conformity with the provisions of the Laws of that country.</p>
		3.2.3	A Consultant should not have a conflict of interest in the procurement in question as stated in the Rule 81 and this Proposal Loading document.
		3.2.4	A Consultant shall not be eligible to apply for this Services Contract in case it has been debarred by

			Government of Rajasthan or the Procuring Entity under section 46 of the Act or in case the assignment is being financed with the funds of a Development Partner, then by that Development Partner and such a directive is in effect at the time of the submission of this Proposal.
3.3	Pre-condition for applying	3.3.1	<p>(a) The Consultant's organization should have been in operations for at least last three years with the proof of incorporation/ commencement of business.</p> <p>(b) In case of a company, Registration Certificate issued by Registrar of Companies along with Memorandum of Association (MOA)) be submitted.</p> <p>(c) In case of a society, cooperative society, Registration Certificate issued under Societies Registration Act, Cooperative Societies Act along with copy of bye laws be submitted.</p> <p>(d) In case of a partnership firm, Registration Certificate issued by Registrar of Firms along with power of attorney in favour of one partner duly signed by all the partners of the firm.</p> <p>(e) Any other equivalent document in case of any other registered entity.</p> <p>(f) Service Tax Registration Certificate in the name of the Consultant.</p>
3.4	Eligibility of	3.4.1	In case a shortlisted Consultant intends to associate with Consultant who have not been shortlisted and/or individual expert(s); such other Consultants and/or individual expert(s) may be allowed to be associated if permitted in the Proposal Loading Document, and subject to the eligibility criteria set forth in this document
3.5	Only one	3.5.1	Consultants (including the individual members of any joint venture) shall submit only one proposal either in its own name or as a part of a Joint Venture. If a Consultant submits or participates in more than one proposal, such proposals shall be disqualified. However, this does not limit the participation of the same Sub-Consultant, including individual experts, in more than one proposal.

3.6	Proposal Validity	3.6.1	The Proposal Data Sheet indicates how long Consultants' Proposals must remain valid after the last date of submission of Proposals. During this period, Consultants shall maintain the availability of Professional staff nominated in the Proposal. The Client will make its best effort to complete negotiations within this period. Should the need arise, however, the Client may request Consultants to extend the validity period of their proposals. Consultants who agree to such extension shall confirm that they maintain the availability of the Professional staff nominated in the Proposal, or in their confirmation of extension of validity of the Proposal, Consultants could submit new staff in replacement, which would be considered in the final evaluation for contract award. Consultants who do not agree have the right to refuse to extend the validity of their Proposals.
3.7	Proposal Security/ Proposal Securing Declaration	3.7.1	Unless otherwise specified in the BDS, the Consultant shall furnish as part of its Proposal, a Proposal Security. The amount of Proposal Security shall be in Indian Rupees and 2% of the estimated value of the Services to be procured or such other amount as specified by the State Government in the BDS.
		3.7.2	The Proposal Security may be given in the form of cash, a banker's Cheque or demand draft or bank guarantee of a Scheduled Bank in India, in specified format given Section III [Proposal loading Forms], or deposited through eGRAS as specified in BDS.
		3.7.3	In lieu of Proposal Security, a Proposal Securing Declaration shall be taken from Government Departments and State Government Public Sector Enterprises, Autonomous bodies, Registered Societies, Cooperative Societies which are owned or controlled or managed by the State Government, Public Sector Enterprises of Central Government. For the Proposal Securing Declaration the Consultant shall use the form included in Section III [Proposal Loading Forms].
		3.7.4	Proposal Security instrument or cash receipt of Proposal Security or a Proposal Securing Declaration shall necessarily

			accompany the sealed Proposal. Any Proposal not accompanied by Proposal Security or Proposal Securing Declaration, if not exempted, shall be liable to be rejected.
		3.7.5	Proposal Security of a Consultant lying with the Procuring Entity in respect of other Proposals awaiting decision shall not be adjusted towards Proposal Security for this Proposal. The Proposal Security originally deposited may, however be taken into consideration in case Proposals are re-invited.
		3.7.6	The bank guarantee presented as Proposal Security shall be got confirmed from the concerned issuing bank. However, the confirmation of the bank guarantee shall not be valid if the issuing bank has become insolvent or has gone under liquidation or has otherwise ceased to be creditworthy.
		3.7.7	The Proposal Security of unsuccessful Consultants shall be refunded soon after final acceptance of successful Proposal and signing of Contract Agreement and submission of Performance Security by successful Consultant.
		3.7.8	The Proposal Security taken from a Consultant shall be forfeited in the following cases, namely:- i. when the Consultant withdraws or modifies his Proposal after opening of Proposals; or ii. when the Consultant does not execute the agreement within the specified time; if any, after issue of Letter of Acceptance within the specified period; or iii. when the Consultant fails to commence the Services as per the Letter of Acceptance within the time specified; or iv. when the Consultant does not deposit the Performance Security in the specified time limit after the Letter of Acceptance is issued; v. if the Consultant breaches any provision of the Code of Integrity prescribed for Consultants as specified in the Act, Chapter VI of the Rules or ITC Sub-Clause 3.1.5.1 [Code of Integrity]; or vi. if the Consultant does not accept the correction of its Proposal Price pursuant to ITC sub-Clause 7.4.3.1, 7.4.3.2 [Correction of Errors].
		3.7.9	In case of the successful Consultant, the amount of

			Proposal Security may be adjusted in arriving at the amount of the Performance Security, or refunded if the successful Consultant furnishes the full amount of Performance Security. No interest will be paid by the Procuring Entity on the amount of Proposal Security.
		3.7.10	<p>The Procuring Entity shall promptly refund the Proposal Security of the Consultants at the earliest of any of the following events, namely:-</p> <ul style="list-style-type: none"> i. the expiry of validity of Proposal Security, but the proposal in such case shall not be considered; ii. the execution of agreement for procurement and Performance Security is furnished by the successful Consultant; iii. the cancellation of the procurement process; or iv. the withdrawal of Proposal prior to the deadline for presenting Proposals, unless the Proposal loading Document stipulates that no such withdrawal is permitted.
S. No	Particulars	Clause	Description
4 Clarification and Amendment of RFP Documents			
4.1		4.1.1	Consultants may request a clarification of any of the RFP Documents up to the number of days indicated in the Proposal Data Sheet before the proposal submission date. Any request for clarification must be sent in writing, or by standard electronic means to the Client's address indicated in the Proposal Data Sheet. The Client will respond in writing, or by standard electronic means and will send written copies of the response (including an explanation of the query but without identifying the source of inquiry) to all shortlisted Consultants. Should the Client deem it necessary to amend the Proposal Document as a result of a clarification, it shall do so following the procedure under clause 4.1.2.
		4.1.2	<ul style="list-style-type: none"> i. At any time before the deadline for submission of Proposals, the Client may amend the RFP Documents by issuing an addendum in writing or by standard electronic means. The addendum shall be sent to all shortlisted Consultants and will be binding on them. The Consultants shall acknowledge receipt of all amendments. It shall

			<p>also be uploaded on the State Public Procurement Portal and the Procuring Entity's web site, where available.</p> <p>ii. To give Consultants reasonable time in which to take an amendment into account in their Proposals the Client may, if the amendment is substantial, extend the deadline for the submission of Proposals by uploading it on its official website and State Public Procurement Portal.</p> <p>ii. The Consultants may submit a modified proposal to take into account the amendment of RFP, prior to deadline for submission of proposals.</p>
S. No	Particulars	Clause	Description
5. Preparation of Proposals			
5.1	General	5.1.1	The Proposal, as well as all related correspondence exchanged by the Consultants and the Client, shall be written in the language (s) specified in the Proposal Data Sheet.
		5.1.2	In preparing their Proposal, Consultants are expected to examine in detail the RFP document. Material deficiencies in providing the information requested may result in rejection of a Proposal.
		5.1.3	While preparing the Technical Proposal, Consultants must give particular attention to the following:
		5.1.3.1	If a Consultant considers that it may enhance its expertise for the assignment by associating with other Consultants in a joint venture or sub-consultancy, it may associate with other Consultants, if so indicated in the Proposal Data Sheet.. In case of a joint venture, all partners shall be jointly and severally liable and shall indicate how will act as the leader of the joint venture. A maximum consortium of 03 members will be allowed by the Procuring Entity.

		5.1.3.2	<p>For Time Based input, the estimated number of Professional staff-months or the budget for executing the assignment shall be shown in the Proposal Data Sheet, but not both. However, the Proposal shall be based on the number of Professional staff-months or budget estimated by the Consultants.</p> <p>For Fixed-Budget based assignments, the available budget is given in the Proposal Data Sheet, and the Financial Proposal shall not exceed this budget, while the estimated number of Professional staff-months shall not be disclosed.</p> <p>For Lump-sum based assignments, the Financial Proposal shall quote the amount being proposal by the Consultant for the assignment which will be valid across the professional man months required and shall not be revised, unless expressly indicated otherwise, in case the man months exceed the agreed time duration for the said services.</p>
		5.1.3.3	<p>Alternative professional staff shall not be proposed, and only one Curriculum Vitae (CV) may be submitted for each position.</p>
		5.1.3.4	<p>Documents to be issued by the Consultants as part of this assignment must be in the language(s) specified in the Proposal Data Sheet. If it indicates two languages, the language in which the proposal of the successful Consultant will be submitted shall govern for the purpose of interpretation. It is desirable that the firm's Personnel have a working knowledge of the Client's national language.</p>
5.2	Technical Proposal Format and Content	5.2.1	<p>The Proposal Data Sheet indicates the format of the Technical Proposal to be submitted. Depending on the nature of the assignment, the Consultant is required to submit a Full Technical Proposal (FTP), or a Simplified Technical Proposal (STP) as indicated in the Proposal Data Sheet and using the Standard Forms provided in Section III of the RFP. Submission of the wrong type of Technical Proposal will result in the</p>

			<p>Proposal being deemed non-responsive. The Technical Proposal shall provide the information indicated in the following paras from 5.2.1.1 to 5.2.1.7. The recommended number of pages for the description of the approach, methodology and work plan has also been indicated. A page is considered to be one printed side of A4 or letter size paper.</p>
		5.2.1.1	<p>The Technical Proposal should include: Brief description of the Consultants' organization (approximately 2 Pages) and an outline of recent experience (approximately 10 relevant assignments executed in the last three years) of the Consultant and, in the case of joint venture, for each partner, on assignments of a similar nature is required in Form TECH-2 of Section III. For each assignment, the outline should indicate the names of Sub-Consultants/ Professional staff who participated, duration of the assignment, contract amount, and Consultant's involvement. Information should be provided only for those assignments for which the Consultant was legally contracted by the client as a corporation or as one of the major firms within a joint venture.</p> <p>Assignments completed by individual Professional staff working privately or through other consulting firms cannot be claimed as the experience of the Consultant, or that of the Consultant's associates, but can be claimed by the Professional staff themselves in their CVs. Consultants should be prepared to substantiate the claimed experience if so requested by the Client.</p>
		5.2.1.2	<p>Comments and suggestions on the Terms of Reference including workable suggestions that could improve the quality/ effectiveness of the assignment; and on requirements for counterpart staff and facilities including administrative support, office space, local transportation, equipment, data, etc. to be provided by the Client (Form TECH-3 of Section III).</p>

		5.2.1.3	A description of the approach, methodology and work plan for performing the assignment covering the following subjects: technical approach and methodology, work plan, and organization and staffing schedule. Guidance on the content of this Section of the Technical Proposals is provided under Form TECH-4 of Section III. The work plan should be consistent with the Work Schedule (Form TECH-5 of Section III) which will show in the form of a bar chart the timing proposed for each activity.
		5.1.2.4	The list of the proposed Professional staff team by area of expertise, the position that would be assigned to each staff team member, and their tasks with time input be provided in Form for Team Composition, Assignment and Key Experts Inputs (Form TECH-6 of Section III). The staff-months input should be indicated separately for home office and field activities, and for foreign and local Professional staff.
		5.2.1.5	CVs of the Professional staff shall be signed by the staff themselves and countersigned by the Consultant (Form TECH-6 Part-II of Section III).
		5.2.1.6	A detailed description of the proposed methodology and staffing for training, if the Proposal Data Sheet specifies training as a specific component of the assignment.
		5.2.2	The Technical Proposal shall not include any financial information. A Technical Proposal containing financial information may be declared as non responsive.
5.3	Financial Proposals	5.3.1	The Financial Proposal shall be prepared using the attached Proposal Loading Forms (Section III). It shall list all costs associated with the assignment, including (a) remuneration for staff (foreign and local, in the field and at the Consultants' home office), and (b) reimbursable expenses, if indicated in the Proposal Data Sheet. If appropriate, these costs should be broken down by activity and, if appropriate, into foreign and local expenditures. All activities and items described in the Technical Proposal must be priced separately; activities and items described in the Technical Proposal but not priced, shall be assumed to be included in the prices of other activities or items.

5.4	Currencies of Proposal and Payments	5.4.1	The unit rates and the Prices shall be quoted by the Consultants entirely in Indian Rupees and all payments shall be made in Indian Rupees., unless otherwise specified in Proposal Data Sheet. Payment of Local cost portion of the Price shall be made in Indian Rupees.
		5.4.2	Commissions and gratuities, if any, paid or to be paid by Consultants and related to the assignment will be listed in the Financial Proposal Form FIN-1 of Section III.
5.5	Taxes	5.5.1	The Consultant and its Sub-consultants and Experts are responsible for meeting all tax liabilities arising out of the Contract unless stated otherwise in the Proposal Data Sheet. Information on taxes in India is provided in the Proposal DataSheet.
6. Submission, Receipt and Opening of Proposals			
S.No.	Particulars	Clause	Description
6.1	Submission, Receipt and Opening of Proposals	6.1.1	The original proposal shall contain no interlineations or overwriting, except as necessary to correct errors made by the Consultants themselves. The person who signed the proposal must sign such corrections. Submission letters for both Technical and Financial Proposals should respectively be in the format of TECH-1 of Section III, and FIN-1 of SectionIII.

		6.1.2	<p>The Consultant or a person authorised by the Consultant shall sign all pages of the original Technical and Financial Proposals. The authorization shall be in the form of a written power of attorney accompanying the Proposal or in any other form demonstrating that the representative has been dully authorized to sign.</p> <p>A Proposal submitted by a Joint Venture shall be signed by all members so as to be legally binding on all members, or by an authorized representative who has a written power of attorney signed by each member’s authorized representative.</p> <p>The signed Proposal shall be marked “Original”, and its copies marked “Copy” as appropriate. The number of copies is indicated in the Proposal Data Sheet. All copies shall be made from the signed original. If there are discrepancies between the original and the copies, the original shallprevail.</p>
		6.1.3	<p>The original and all copies of the Technical Proposal shall be placed in a sealed envelope clearly marked “Technical Proposal” Similarly, the original Financial Proposal (if required under the selection method indicated in the Proposal Data Sheet) shall be placed in a sealed envelope clearly marked “Financial Proposal” followed by the name of the assignment, and with a warning “Do Not Open With The Technical Proposal.” The envelopes containing the Technical and Financial Proposals shall be placed into an outer envelope and sealed. This outer envelope shall bear the submission address, reference number and be clearly marked “Do Not Open, Before [insert the time and date of the submission deadline indicated in the Proposal Data Sheet]”. The Client shall not be responsible for misplacement, losing or premature opening if the outer envelope is not sealed and/or marked as stipulated. This circumstance may be case for Proposal rejection. If the Financial Proposal is not submitted in a separate sealed envelope duly marked as indicated above, this will constitute grounds for declaring the Proposalnon-responsive.</p>

		6.1.4	<p>The Proposal or its modification must be sent by hand or by post to the address/addresses indicated in the Proposal Data Sheet and received by the Client no later than the time and the date indicated in the Proposal Data Sheet, or any extension to the date.</p> <p>If electronic submission of the Proposals is requested, they must be submitted through the website of State e-Procurement Portal, http://eproc.rajasthan.gov.in. Any proposal received by the Client after the deadline for submission shall be returned unopened.</p>
		6.1.5	The Client shall open the Technical Proposal at the time and place indicated in the Proposal Data Sheet.
		6.1.6	The Client's Proposals opening committee shall conduct the opening of the Technical Proposals in the presence of the shortlisted Consultants or their authorised representatives who choose to attend (in person, or online if this option is offered in the Proposal Data Sheet) on the opening date, time and the address as stated in the Proposal Data Sheet. The envelopes with the Financial Proposal shall remain sealed and shall be securely stored until they are opened in accordance with ITC Clause 7.4
		6.1.7	At the opening of the Technical Proposals the following shall be read out: (i) the name and address of the Consultant or, in case of a Joint Venture, the name of the Joint Venture, the name of the lead member and the names and the addresses of all members; (ii) the presence or absence of Proposal Document price, if any, Proposal Security/ Proposal Securing Declaration, e-Proposal processing fee or user charges, if any (iii) any modifications to the Proposal submitted prior to proposal submission deadline; and (iv) any other information deemed appropriate or as indicated in the Proposal Data Sheet.

7. Proposals Evaluation

S.No.	Particulars	Clause	Description
7.1	General	7.1.1	From the time the Proposals are opened to the time the Contract is awarded, the Consultants should not contact the Client on any matter related to its Technical and/or Financial Proposal. Any effort by

			<p>Consultants to influence the Client in the examination, evaluation, ranking of Proposals, and recommendation for award of Contract may result in the rejection of the Consultants' Proposal.</p> <p>Notwithstanding the above provisions, from the time of the Proposals' opening to the time of Contract award publication, if a Consultant wishes to contact the Client on any matter related to the selection process, it should do so only in writing.</p> <p>While evaluating the Proposals, the Client will conduct the evaluation solely on the basis of the submitted Technical and Financial Proposals.</p>
7.2	Evaluation of Technical Proposals	7.2.1	<p>The Client's evaluation committee shall evaluate the Technical Proposals on the basis of their responsiveness to the Terms of Reference, applying the evaluation criteria, sub criteria, and point system specified in the Proposal Data Sheet. Minimum requirement of qualifications and experience (general and specific) of the firm and key and non-key personnel of the Consultant's firm, if any, shall be as specified in the Proposal Data Sheet.</p> <p>Each responsive Proposal will be given a technical score (St). A Proposal shall be rejected at this stage if it does not respond to important aspects of the RFP, and particularly the Terms of Reference or if it fails to achieve the minimum technical score indicated in the Proposal Data Sheet.</p> <p>Evaluators of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation is concluded.</p>
7.3	Financial Proposals for Quality Based selection (QBS)	7.3.1	<p>Following the ranking of Technical Proposals, when selection is based on quality only (QBS), the details of the top ranked Consultant will be placed on the State Public Procurement Portal and all other Consultants shall be informed about it. The top ranked Consultant shall be invited to negotiate its proposal and the Contract in accordance with the instructions given under ITC 8.2.1 (For Quality Based Selection).</p> <p>If Financial Proposals were invited together with the</p>

			Technical Proposals, only the Financial Proposal of the technically top-ranked Consultant is opened by the Client's evaluation committee. All other Financial Proposals are returned unopened after the Contract negotiations are successfully concluded and the Contract issued.
7.4	Public Opening and Evaluation of Financial Proposals (for QCBS, FBS, and LCS methods)	7.4.1	After the technical evaluation is completed, the Client shall inform those Consultants whose Technical Proposals did not meet the minimum qualifying technical score (and shall provide information relating to the Consultant's overall technical score, as well as scores obtained for each criterion and sub-criterion) or were considered non responsive to the RFP and TOR, that their Financial Proposals will be returned unopened after completing the selection process. The Client shall simultaneously notify in writing those Consultants that have secured the minimum overall technical score and inform them the date, time and location for opening the Financial Proposals. The result of the technical evaluation shall also be placed on the State Public Procurement Portal. The opening date should allow Consultants sufficient time to make arrangements for attending the opening. The Consultant's attendance at the opening of the Financial Proposals (in person, or online, if such option is indicated in the Proposal Data Sheet) is optional and is at the Consultant's choice.
		7.4.2	The Financial Proposals shall be opened publicly by a committee constituted by the Client for this purpose in presence of those Consultants or their representatives whose proposals have passed the minimum technical score. At the opening, the names of the Consultants, and the overall technical scores, including the breakdown by criterion, shall be read aloud. The Financial Proposals will then be inspected to confirm that they have remained sealed and unopened. These Financial Proposals shall be then opened, and the total prices read aloud and recorded. The Consultants or their representatives who are present at the opening of the Proposals and the members of the Proposals opening Committee shall sign the record.

	Correction of errors	7.4.3	Activities and items described in the Technical Proposal but not priced in the Financial Proposal, shall be assumed to be included in the prices of other activities or items, and no corrections are made to the Financial Proposal.
		7.4.3.1	If a Time-Based contract form is included in the RFP, the Client's evaluation committee will (a) correct any computational or arithmetical errors, and (b) adjust the prices if they fail to reflect all inputs included for the respective activities or items in the Technical Proposal. In case of discrepancy between (i) a partial amount (sub-total) and the total amount, or (ii) between the amount derived by multiplication of unit price with quantity and the total price, or (iii) between words and figures, the former will prevail. In case of discrepancy between the Technical and Financial Proposals in indicating quantities of input, the Technical Proposal prevails and the Client's evaluation committee shall correct the quantification indicated in the Financial Proposal so as to make it consistent with that indicated in the Technical Proposal, apply the relevant unit price included in the Financial Proposal to the corrected quantity, and correct the total Proposal cost.
		7.4.3.2	If a Lump-Sum contract form is included in the RFP, the Consultant is deemed to have included all prices in the Financial Proposal, so neither arithmetical corrections nor price adjustments shall be made. The total price, net of taxes understood as per ITCC Clause 7.5 below, specified in the Financial Proposal (Form FIN-1) shall be considered as the offered price.
7.5	Taxes	7.5.1	The Client's evaluation of the Consultant's Financial Proposal shall exclude taxes and duties in India, if provided in the Proposal Data Sheet.
7.6	Conversion to Single Currency	7.6.1	For the evaluation purposes, prices shall be converted to Indian Rupees using the selling rates of exchange, source and date indicated in the Proposal Data Sheet.

7.7	Evaluation in case of Quality and Cost Based Selection (QCBS)	7.7.1	In case of Quality and Cost Based Selection (QCBS), the lowest evaluated Financial Proposal (Fm) will be given the maximum financial score (Sf) of 100 points. The financial scores (Sf) of the other Financial Proposals will be computed as indicated in the Proposal Data Sheet. Proposals will be ranked according to their combined technical (St) and financial (Sf) scores, S, using the weights (T = the weight given to the Technical Proposal; P = the weight given to the Financial Proposal; T + P = 1) indicated in the Proposal Data Sheet: $S = St \times T\% + Sf \times P\%$. The firm achieving the highest combined technical and financial score will be invited for negotiations.
7.8	Evaluation in case of Fixed-Budget Selection (FBS)	7.8.1	In the case of Fixed-Budget Selection (FBS), the Client will select the firm that submitted the highest ranked Technical Proposal that does not exceed the budget indicated in the RFP, and invite such Consultant to negotiate the Contract. Proposals that exceed the indicated budget will be rejected.
7.9	Evaluation in case of Least-Cost Selection (LCS)	7.9.1	In the case of Least-Cost Selection (LCS), the Client will select the Consultant with the lowest evaluated total price among those consultants that achieved the minimum required technical score, and invite such Consultant to negotiate the Contract.

8. Negotiations and Clarifications

S. No.	Particulars	Clause	Description
8.1	General	8.1.1	The negotiations will be held at the date and address indicated in the Proposal Data Sheet with the Consultant or its representative(s) who must have written power of attorney to negotiate and sign a Contract on behalf of the Consultant.
		8.1.2	The Client shall prepare minutes of negotiations that are signed by the Client and the Consultant or its authorised representative.

8.2	Availability of Key Experts	8.2.1	The invited Consultant shall confirm the availability of all Key Experts included in the Proposal as a pre-requisite to the negotiations, or, if applicable, a replacement in accordance with Clause 3.6 of the ITC. Failure to confirm the Key Experts' availability may result in the rejection of the Consultant's Proposal and the Client proceeding to negotiate the Contract with the next-ranked Consultant.
		8.2.2	Notwithstanding the above, the substitution of Key Experts at the negotiations may be considered if due solely to circumstances outside the reasonable control of and not foreseeable by the Consultant, including but not limited to death or medical incapacity. In such case, the Consultant shall offer a substitute Key Expert within the period of time specified in the letter of invitation to negotiate the Contract, who shall have equivalent or better qualifications and experience than the original candidate.
8.3	Technical negotiations or clarifications	8.3.1	<p>The negotiations include discussions of the Terms of Reference (TORs), the proposed methodology, the Client's inputs, the special conditions of the Contract, and finalizing the "Description of Services" part of the Contract.</p> <p>These discussions shall not substantially alter the original scope of services under the TOR or the terms of the contract, lest the quality of the final product, its price, or the relevance of the initial evaluation be affected.</p>
8.4	Financial negotiations or clarifications	8.4.1	The negotiations include the clarification of the Consultant's tax liability in India and how it should be reflected in the Contract.
		8.4.2	If the selection method included cost as a factor in the evaluation, the total price stated in the Financial Proposal for a Lump-Sum contract shall not be negotiated.
		8.4.3	In the case of a Time-Based contract, unit rates negotiations shall not take place, except when the offered Key Experts and Non-Key Experts' remuneration rates are much higher than the typically charged rates by consultants in similar contracts. In

			such case, the Client may ask for clarifications and, if the fees are very high, ask to change the rates. The format for (i) providing information on remuneration rates in the case of Quality Based Selection; and (ii) clarifying remuneration rates' structure as above, is provided in Appendix A to the Financial Form FIN-3: Financial Negotiations – Breakdown of Remuneration Rates.
8.5	Conclusion of the negotiations	8.5.1	The negotiations will conclude with a review of the finalised draft Contract. To complete negotiations the Client and the Consultant will sign the agreed Contract.
9. Award of Contract			
S.No.	Particulars	Clause	Description
9.1	Award of	9.1.1	<p>After completing negotiations and clarifications and prior to the expiration of the period of validity of the Proposal, the Procuring Entity shall inform the successful Consultant in writing, by registered post or email that its Proposal has been accepted. If the issuance of formal letter of acceptance (LOA) is likely to take time, in the meanwhile a Letter of Intent (LoI) may be sent to the Consultant. The acceptance of an offer is complete as soon as the letter of acceptance or letter of intent is posted and/or sent by email (if available) to the address of the Consultant given in the Proposal.</p> <p>In the written intimation of acceptance of its Proposal sent to the successful Consultant, it shall also be asked to execute an agreement in the format given in the RFP on a non-judicial stamp of requisite value at his cost and deposit the amount of Performance Security or a Performance Security Declaration, if applicable within a period specified in the Proposal Data Sheet or where the period is not specified in the Proposal Data Sheet, then within fifteen days from the date on which the LoA or LoI is dispatched to the successful Consultant.</p> <p>Client shall promptly notify all Consultants who have submitted proposal about the acceptance of the successful offer and also place this information on the State Public Procurement Portal.</p>

		9.1.2	If the Consultant, whose Proposal has been accepted, fails to sign a written procurement contract or fails to furnish the required Performance Security or Performance Security Declaration within the specified time period, the Procuring Entity shall take action against the successful Consultant as per the provisions of the Act and the Rules. The Procuring Entity may, in such case, cancel the procurement process or if it deems fit, offer for acceptance the rates and conditions of successful Consultant, to the Consultant with next lowest or most advantageous responsive Proposal.
		9.1.3	The Consultant is expected to commence the assignment on the date and at the location specified in the Proposal Data Sheet.
		9.1.4	Refer to Proposal Data Sheet for the type of consultancy contract [Time Based or Lump Sum Based Contract]
9.2	Performance Security	9.2.1	<p>Performance Security shall be solicited from the successful Consultant except the departments of the State Government and undertakings, corporations, autonomous bodies, registered societies, co-operative societies which are owned, controlled or managed by the State Government and undertakings of Central Government. However, a Performance Security Declaration shall be taken from them.</p> <p>The amount of Performance Security shall be five percent, or as specified in the Proposal Data Sheet, of the amount of the Contract. The currency of Performance Security shall be Indian Rupees, if not otherwise specified in Proposal Data Sheet.</p> <p>The Consultant shall deliver the Performance Security to the Procuring Entity within 15 days or such other time period as specified in the Proposal Data Sheet, after issue of the Letter of Award.</p>
		9.2.2	<p>Performance Security shall be furnished in one of the following forms:</p> <p>(a) Deposit through eGRAS; or</p> <p>(b) Bank Draft or Banker's Cheque of a Scheduled Bank in India; or</p> <p>(c) National Savings Certificates and any other script/</p>

			<p>instrument under National Savings Schemes for promotion of small savings issued by a Post Office in Rajasthan, if the same can be pledged under the relevant rules. They shall be accepted at their surrender value at the time of Proposal and formally transferred in the name of the Procuring Entity with the approval of Head Post Master; or</p> <p>(d) Bank guarantee. It shall be in the form given in Section VC, Contract Forms, issued by a Scheduled Bank in India and shall be got verified from the issuing bank; or</p> <p>(e) Fixed Deposit Receipt (FDR) of a Scheduled Bank in India. It shall be in the name of the Procuring Entity on account of Consultants and discharged by the Consultants in advance. The Procuring Entity shall ensure before accepting the Fixed Deposit Receipt that the Consultants furnishes an undertaking from the bank to make payment/ premature payment of the Fixed Deposit Receipt on demand to the Procuring Entity without requirement of consent of the Consultant concerned. In the event of forfeiture of the Performance Security, the Fixed Deposit shall be forfeited along with interest earned on such Fixed Deposit.</p> <p>Performance Security furnished in the form of a document mentioned at options (ii) to (v) above shall remain valid for a period of sixty days beyond the date of completion of the services and all contractual obligations of the Consultant.</p>
		9.2.3	<p>Forfeiture of Performance Security : Amount of Performance Security in full or part may be forfeited in the following cases:-</p> <p>(a) when the Consultant does not execute the agreement in accordance with ITC Clause 9.1 [Award of Contract] within the specified time; after issue of letter of acceptance of offer; or</p> <p>(b) when the Consultant fails to commence the Services as per Letter of Award within the time specified; or</p> <p>(c) when the Consultant fails to complete the Services satisfactorily within the time specified; or</p> <p>(d) when any terms and conditions of the contract is breached; or</p> <p>(e) to adjust any accepted dues against the</p>

			<p>Consultant from any other contract with the Procuring Entity; or</p> <p>(f) if the Consultant breaches any provision of the Code of Integrity prescribed for Consultants in the Act and Chapter VI of the Rules and ITC Clause 3.1.</p> <p>Notice of reasonable time will be given in case of forfeiture of Performance Security. The decision of the Procuring Entity in this regard shall be final.</p>
9.3	Payments	9.3.1	All payments shall be made in Indian Rupees unless otherwise specified in Proposal Data Sheet.
9.4	Schedule of Payments	9.4.1	Payment Schedule will be contingent upon the type of Contract as specified in the Proposal Data Sheet.
10. Confidentiality			
S.No.	Particulars	Clause	Description
10	Confidentiality	10.1	In addition to the restrictions specified in section 49 of the Act and Rule 77 of the Rules, all information contained in this RFP should be treated as commercially confidential and the Consultants are required to limit dissemination on a need-to-know basis. Information relating to evaluation of Proposals and recommendations concerning awards shall not be disclosed to the Consultants who submitted the Proposals or to other persons not officially concerned with the process, until the publication of the award of Contract. The undue use by any Consultant of confidential information related to the process may result in the rejection of its Proposal.
11. Grievance Redressal During Procurement Process			
S.No.	Particulars	Clause	Description
11	Grievance Redressal	11.1	Any grievance of a Consultant pertaining to the procurement process shall be by way of filing an appeal to the First or Second Appellate Authority, as the case may be, as specified in the BDS, in accordance with the provisions of chapter III of the Act and chapter VII of the Rules and as given in Appendix A to these ITC.

Appendix A: Grievance Handling Procedure during Procurement Process (Appeals)

(1) Filing an appeal

(a) If any Consultants or prospective Consultants is aggrieved that any decision, action or omission of the Procuring Entity is in contravention to the provisions of the Act or the Rules or the Guidelines issued thereunder, he may file an appeal to the First Appellate Authority as specified in the Proposal Data Sheet, within a period of ten days from the date of such decision, action, or omission, as the case may be, clearly giving the specific ground or grounds on which he feels aggrieved:

Provided that after the declaration of a Consultants as successful in terms of section 27 of the Act, the appeal may be filed only by a Consultants who has participated in procurement proceedings:

Provided further that in case a Procuring Entity evaluates the Technical Proposal before the opening of the Financial Proposal, an appeal related to the matter of Financial Proposal may be filed only by a Consultants whose Technical Proposal is found to be acceptable.

(b) After hearing the parties, the First Appellate Authority shall dispose of the appeal and pass an order within a period of 30 days of the date of filing of the appeal.

(c) If the First Appellate Authority fails to dispose of the appeal within the period 30 days of the date of filing the appeal or if the consultants or prospective consultants or the procuring entity is aggrieved by the order passed by the First Appellate Authority, the consultants or prospective consultants or the procuring entity, as the case may be, may file a second appeal to the Second Appellate Authority as specified in the Proposal Data Sheet, within fifteen days. The Second Appellate Authority, after hearing the parties, shall dispose of the appeal and pass an order within a period of 30 days which shall be final and binding on the parties.

(2) Appeal not to lie in certain cases

No appeal shall lie against any decision of the Procuring Entity relating to the following matters, namely:-

- (a) determination of need of procurement;
- (b) provisions limiting participation of Consultants in the Proposal Loading process;
- (c) the decision of whether or not to enter into negotiations;
- (d) cancellation of a procurement process;
- (e) applicability of the provisions of confidentiality.

(3) Form and procedure of filing an appeal

- (a) An appeal shall be in the annexed Form along with as many copies as there are respondents in the appeal.
- (b) Every appeal shall be accompanied by an order appealed against, if any, affidavit verifying the facts stated in the appeal and proof of payment of fee.
- (c) Every appeal may be presented to First Appellate Authority or Second Appellate Authority, as the case may be, in person or through registered post or authorised representative.

(4) Fee for filing appeal

- (a) Fee for first appeal shall be rupees two thousand five hundred and for second appeal shall be rupees ten thousand, which shall be non-refundable.
- (b) The fee shall be paid in the form of bank demand draft or banker's Cheque of a Scheduled Bank in India payable in the name of Appellate Authority concerned.

(5) Procedure for disposal of appeals

- (a) The First Appellate Authority or Second Appellate Authority, as the case may be, upon filing of appeal, shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing.
- (b) On the date fixed for hearing, the First Appellate Authority or Second Appellate Authority, as the case may be, shall,
 - (i) hear all the parties to appeal present before him; and
 - (ii) peruse or inspect documents, relevant records or copies thereof relating to the matter.
- (c) After hearing the parties, perusal or inspection of documents and relevant records or copies thereof relating to the matter, the Appellate Authority concerned shall pass an order in writing and provide the copy of order to the parties to appeal free of cost.
- (d) The order passed under sub-clause (c) above shall be placed on the State Public Procurement Portal.

Annexure

FORM No. 1
[See rule 83]

Memorandum of Appeal under the Rajasthan Transparency in Public Procurement Act, 2012

Appeal Noof
Before the (First / Second Appellate Authority)

1. Particulars of appellant:

- i. Name of the appellant:
- ii. Official address, if any:
- iii. Residential address:

2. Name and address of the respondent(s):

- (i)
- (ii)
- (iii)

3. Number and date of the order appealed against and name and designation of the officer /authority who passed the order (enclose copy), or a statement of a decision, action or omission of the Procuring Entity in contravention to the provisions of the Act by which the appellant is aggrieved:

4. If the Appellant proposes to be represented by a representative, the name and postal address of the representative:

5. Number of affidavits and documents enclosed with the appeal:

6. Grounds of appeal:

.....
.....
..... (Supported by an affidavit)

7. Prayer:

.....
.....Place

.....Date..... Appellant's Signature

Section II: Proposal Data Sheet

ITC clause Reference	
2.1.1	<p>The Procuring Entity (Client) with full address: Jaipur Smart City limited, Rajasthan JMC Building, Pt Deendayal Upadhyay Bhawan, LalKothi, Tonk Road, Jaipur-302016. Method of selection: QCBS</p>
2.1.3	<p>i. Financial Proposal to be submitted together with Technical Proposal ii. Name of the assignment is: Preparation of Detail Project Report for Proposed Tunnel/Subway from Sanganeri Gate to Jorawar Singh Gate and Parking below Johari Bazar</p>
2.1.4	<p>A Pre-proposal Meeting will take place at the JMC Building ,Pt Deendayal Upadhyay Bhawan,LalKothi,Tonk Road,Jaipur-302016.on: Date: 25 October, 2017 and Time: 11 AM</p> <hr/> <p>No Site visit shall be organised by the procuring entity. However, consultants are advised to visit the sites at their own expenses and if any support is required, shall be provided by the Executive Officer/Engineer</p>
2.1.5	<p>The Client will provide the following inputs and facilities:</p> <ol style="list-style-type: none"> 1. All available reports pertaining to this consultancy. 2. Facilitate the consultant's meeting with other organizations, as may be felt necessary.
3.2.1	<p>Whether Joint Ventures are permitted to submit Proposals: Yes</p>
3,2.1	<p>(a)all parties to the Joint Venture, Consortium or Association will submit a MoU stating that they shall be jointly and severally liable; and will authorize one person who will sign the Proposal.</p>
	<p>(a) The Consultant's organization should have been in operations for at least last five years with the proof of incorporation/ commencement of business.</p>
3.6.1	<p>Proposal validity shall be 120 days from the last date of submission of the Proposal.</p>
3.7.1	<p>The amount of Proposal Security shall be in Indian Rupees and 2% of the estimated value of the Services (i.e. eighty lakh) to be procured.</p>

4.1.1	<p>For clarification purposes only, the Procuring Entity's (Client's) address is: OFFICE OF THE CHIEF EXECUTIVE OFFICER Jaipur Smart City Limited. JMC Building, Pt Deendayal Upadhyay Bhawan LalKothi, Tonk Road, Jaipur-302016 Phone No. 0141-2741346/2741347, E-Mail ID: jscljaipur@gmail.com</p>
5.1.1	Proposals shall be submitted in the following language: English
5.1.3.1	Consultants may associate with other Consultants: Yes
5.1.3.2	<p>(i) For Fixed Budget based assignments: The total available budget for this Fixed-Budget assignment is: 330,00,000.00 (Three Crore / thirty lacs) only (inclusive of all taxes, but excluding GST). GST will be paid to the Consultant as per the prevailing rate. Proposals exceeding the total available budget will be rejected.</p>
5.2.1	The format of the Technical Proposal to be submitted is: FTP (Full Technical Proposal)
5.2.1.7	Whether the assignment includes training component: <u>NO</u>
5.3.1	None
5.4.1	The Price for the Services shall be expressed in Indian Rupees only.
5.5.1	<p>Amount payable by the Client to the Consultant under the contract to be subject to local taxation : <u>Yes</u> However, GST will be paid to the Consultant as per the prevailing rate.</p>
6.1.2	Consultant shall submit Technical and Financial Proposals separately.
6.1.3	Not Applicable
6.1.4	<p>This is an "on-line RFP". Therefore, tender documents in physical form shall not be available for sale but can be downloaded from the website and pay cost (Rs 20,000/-) while submitting the filled-up RFP to the Procuring Entity along with the processing fee of Rs 1,000/- separately in favour of RISL, Jaipur</p> <p>The bidder should submit, by date & time specified in NIT, in original, hard copies of (i) cost of bid document as Rs. 20,000/- in the form of DD/Banker's Cheque of a scheduled bank in India or eGRAS in the name of Chief Executive Officer, Jaipur Smart City Limited payable at Jaipur; (ii) Bid processing fee of Rs. 1,000/- in the form of DD in the name of Managing Director, RISL, Jaipur payable at Jaipur; (iii) Proposal Security as per RTPP; (iv) Letter of Technical Bid; (v) Power of Attorney; and (vi) Joint Venture Agreement, if applicable. The bidder should upload scanned copies of these documents on e-procurement web-site along with their technical proposals.</p>

	Proposals are required to be submitted in Electronic Format, it shall be submitted on the e-procurement portal: http://eproc.rajasthan.gov.in												
6.1.5	The opening of Proposals shall take place at: Same place as given in 4.1.1												
.7.2.1	<p>1. The Technical proposals submitted by the Consultants will first be scrutinized in its completeness as also whether they maintain minimum initial requirement like</p> <ol style="list-style-type: none"> i. Years of Experience in field of Consultancy, ii. Average Annual Turn Over iii. the Consultants Net Worth iv. Value of Pending Litigation <p>2. Minimum requirement of firm, to qualify for further evaluation are:</p> <ol style="list-style-type: none"> i. Years of Experience: 5 years for Sole Entity/ Lead Partner ii. Average Annual Turn Over for Sole Entity/ Lead Partner for last 3 years: Not less than the Budgetary / Estimated Cost iii. Net Worth: Must be positive for Sole Entity as also for Each partner of JV/Consortium/ Association iv. Total amount of Pending Litigation of Sole Entity/ Lead Partner shall not be more than 50% of the Estimated Cost (Budgetary cost of the consultancy). <p>3. Criteria, sub-criteria, and point system for the evaluation of Technical Proposals are:</p> <p>(i) Specific experience of the Consultants in Tunnels relevant to the assignment:</p> <ol style="list-style-type: none"> a. Minimum 2 DPRs for tunnels having a length of at least 1 km. 4Points b. Minimum 3 DPRs for tunnels having a length of at least 1 km. 7Points c. Minimum 5DPRs for tunnels having a length of at least 1 km. 10Points <p>(ii) Adequacy of the proposed methodology and work plan in response to the Terms of Reference:</p> <ol style="list-style-type: none"> a. Technical approach and methodology: 10 points b. Work plan: 5 points c. Organization and staffing: 5 points <p style="text-align: center;">STotal points for criterion (ii): 20 Points</p> <p>(iii) Key professional staff qualifications and competence for the assignment:</p> <table style="width: 100%; border: none;"> <tr> <td>a. Team leader cum Senior Tunnel Engineer</td> <td style="text-align: right;">13 points</td> </tr> <tr> <td>b. Tunnel Design Engineer</td> <td style="text-align: right;">10 points</td> </tr> <tr> <td>c. Senior Geologist</td> <td style="text-align: right;">7 points</td> </tr> <tr> <td>d. Senior E & M Expert</td> <td style="text-align: right;">5 points</td> </tr> <tr> <td>e. Transport Planner</td> <td style="text-align: right;">5 points</td> </tr> <tr> <td>f. Senior Survey Engineer</td> <td style="text-align: right;">5 points</td> </tr> </table>	a. Team leader cum Senior Tunnel Engineer	13 points	b. Tunnel Design Engineer	10 points	c. Senior Geologist	7 points	d. Senior E & M Expert	5 points	e. Transport Planner	5 points	f. Senior Survey Engineer	5 points
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c. Senior Geologist	7 points												
d. Senior E & M Expert	5 points												
e. Transport Planner	5 points												
f. Senior Survey Engineer	5 points												

	<p>g. Transport Planner 5 points</p> <p>h. Environmental Specialist 5 points</p> <p>i. Highway cum pavement Engineer 5 points</p> <p>j. Quantity Surveyor 5 points</p> <p>k. Financial Expert 5 points</p> <p>Total marks for criterion(iii): 70 Points</p> <p>The number of points to be assigned to each of the above positions or disciplines shall be determined considering the following three sub-criteria and relevant percentage weights:</p> <table border="0"> <tr> <td>a. Qualifications</td> <td>30%</td> </tr> <tr> <td>b. Adequacy for the assignment</td> <td>60%</td> </tr> <tr> <td>c. Experience in region and language</td> <td>10%</td> </tr> </table> <p style="text-align: center;">Total weight: 100%</p> <p>Total points for the three criteria: 100</p> <p>The minimum technical score (St) required to pass is: 70 Points</p>	a. Qualifications	30%	b. Adequacy for the assignment	60%	c. Experience in region and language	10%
a. Qualifications	30%						
b. Adequacy for the assignment	60%						
c. Experience in region and language	10%						
7..5.1	(i) For the purpose of the evaluation, the Client will include : all local identifiable indirect taxes (excluding GST) levied on the Contract's invoices and If a Contract is awarded, at Contract negotiations, all such taxes will be discussed, finalized (using the itemized list as a guidance but not limiting to it) and added to the Contract amount as a separate line, also indicating which taxes shall be paid by the Consultant and which taxes are withheld and paid by the Client on behalf of the Consultant.						
7.6.1	Not Applicable						
7.7.1	<p>The formula for determining the financial scores is the following:</p> <p>$S_f = 100 \times F_m / F$, in which S_f is the financial score, F_m is the lowest price and F the price of the proposal under consideration</p> <p>The weights given to the Technical and Financial Proposals are: T = 0.7 and P = 0.3</p>						
8.1.1	Expected date and address for contract negotiations: 31 November 2017						
9.1.1	The time period within which the successful Consultant shall have to submit Performance Security and sign the Contract Agreement after issue of LOA or LOI by the Client is: 15 Days						
9.1.3	Expected date and location for commencement of consulting services are: 01 January 2018						
9.1.4	The consultancy contract will be : Lump Sum Based Contract						

9.2.1	Whether Performance Security or Performance Security Declaration shall be required from the successful consultant: Yes If yes, the amount of Performance Security shall be @ 10 % of the Contract amount.
9.3.1	The currency(s) of payment in addition to Indian Rupees is: None
9.4	For a Lump Sum based Contract invoice shall be due on: Submission And Acceptance of the Deliverable For Lump Sum Contracts, Expenses over and above the Professional Fees “ will not ” be paid by the Client. The schedule of Payments will be as follows: As mentioned in relevant Clause of Special Conditions of Contract (SCC)
9.4	Not Applicable
11.1	First Appellate Authority shall be: Dy. Secretary/Joint secretary, LSGD, Rajasthan Second Appellate Authority shall be: Secretary/Principal Secretary, LSGD, Rajasthan.

III. Terms of Reference (ToR)

1. Consultancy Services for carrying out Detailed Project Report for Integrated Subway from Sanganeri Gate to Zorawar Singh Gate

1.1 Jaipur City is characterized by high density of residents with commercial areas along the major roads in Walled city area. Initially these were residential areas which were later converted into commercial areas in ground floor, the top floors still remain residential. Due to this conversion the parking requirement is high in these areas and considerable width of the road space is utilized for parking leading to congestion on streets. Further the covered pedestrian paths are encroached by the vendors. Due to this the pedestrians are forced to use the road space which further adds to the problem of congestion.

1.2 Comprehensive Mobility Plan is prepared for the Jaipur City and the main observations of the Comprehensive Mobility Plan are:

- It is envisaged that by the year 2031, the population within the Jaipur Region will be about 93 lakhs. This would translate into 6.33 lakhs peak hour motorized trips in the year 2031, which will be about 2.8 times the present day peak hour trips.
- The roads in Pink city are congested due to unauthorized parking, hawkers, encroachments and traffic indiscipline which hinder free movement of traffic.
- Insufficient road space: Because of encroachments the roads in Ramganj bazar, Chandpol bazar, Gangori bazar, Kishanpol bazar, Johari Bazar, Nirman Marg have become narrow (lack of proper regulations) and poor maintenance causes problems related to both traffic and infrastructure installations.
- Traffic volumes are very high in the walled city vicinity. Volume Capacity ratio is found to be more than 1 during peak hours.
- Absence of off-street parking facilities result in haphazard parking along road, lead to congestion on roads.
- Highest parking demand is recorded in and around the walled city area
- To achieve transport goals some important strategies are enlisted are:
 - Land use and transport strategy
 - Development of Mobility Corridors
 - Parking Management Strategy

1.3 Jaipur being one of the important tourist destinations, many tourists about 4400 tourists visit daily.

1.4 Considering the above scenario and to address problems in and around walled city, a study has been conducted to decongest the considered stretch and provide ample parking space. As a result of study 2 proposals are put forth considering the objectives and goals of Comprehensive Mobility Plan for Jaipur.

1.5 To relieve the issues the following proposals are made:

- a. Vehicular subway from Sanganeri Gate to Jorawar Singh Gate
- b. Parking below Johari Bazar stretch (2 tunnels)

As per the Pre-feasibility report it is proposed to develop two two lane tunnels with attendant maintenance walkway and drainage facilities. However, the DPR consultant has to check the feasibility of the same and propose accordingly.

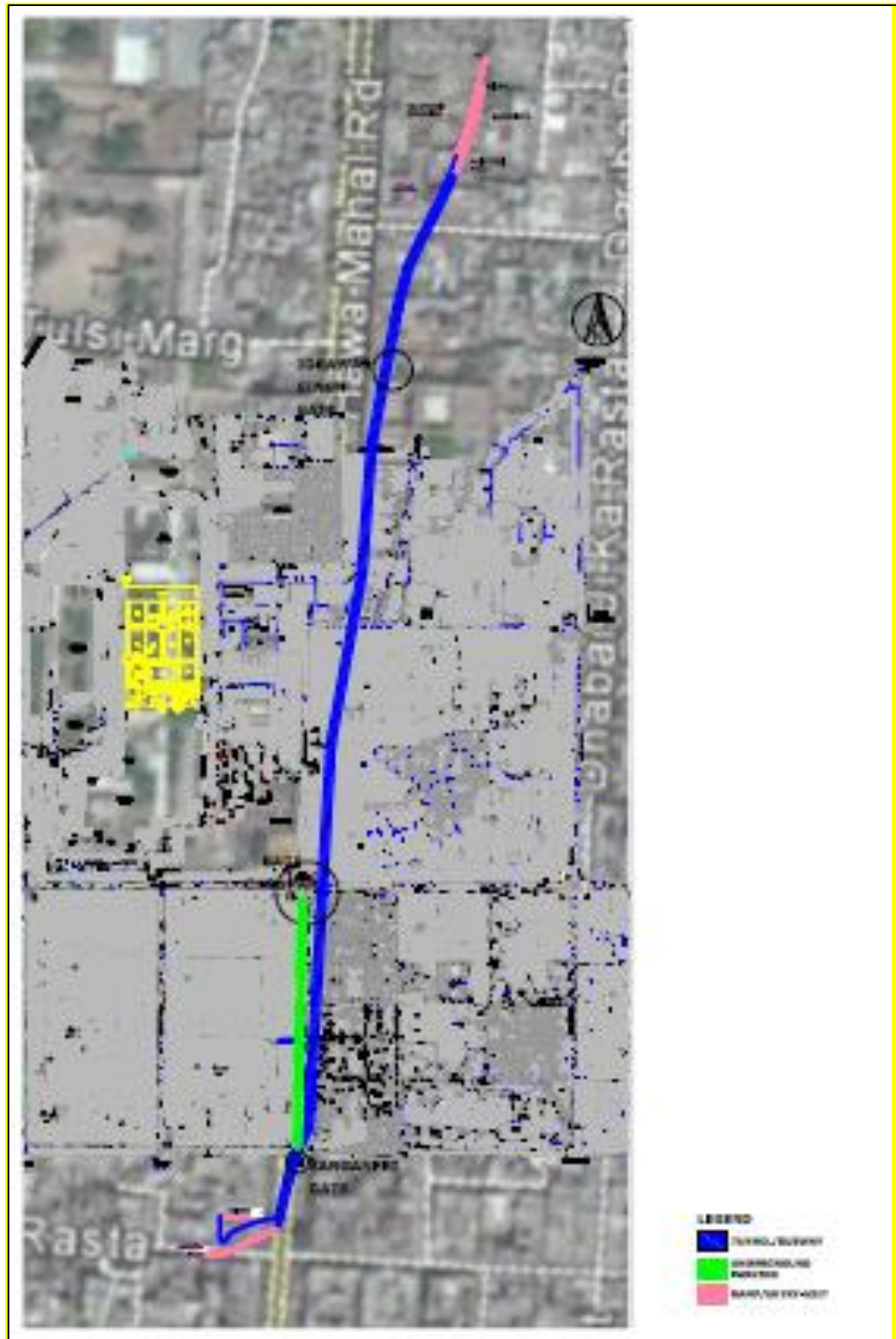


Fig 1- Proposed schematic Alignment of the Tunnel/Subway and Underground Parking

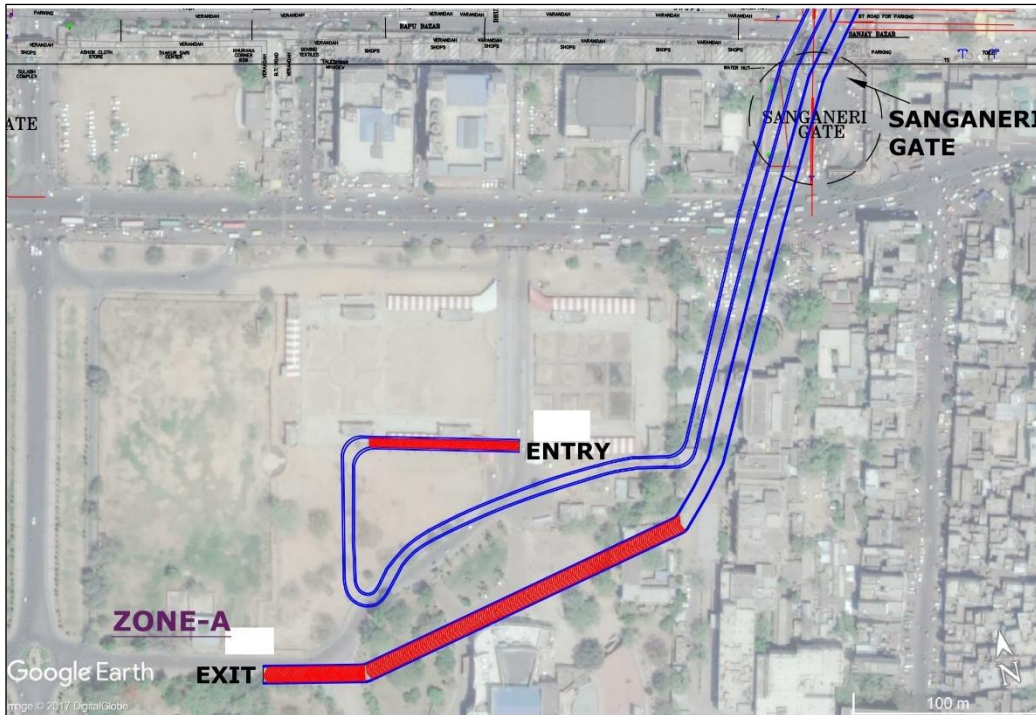


Fig 2 – Proposed schematic arrangement at Sanganeri Gate end

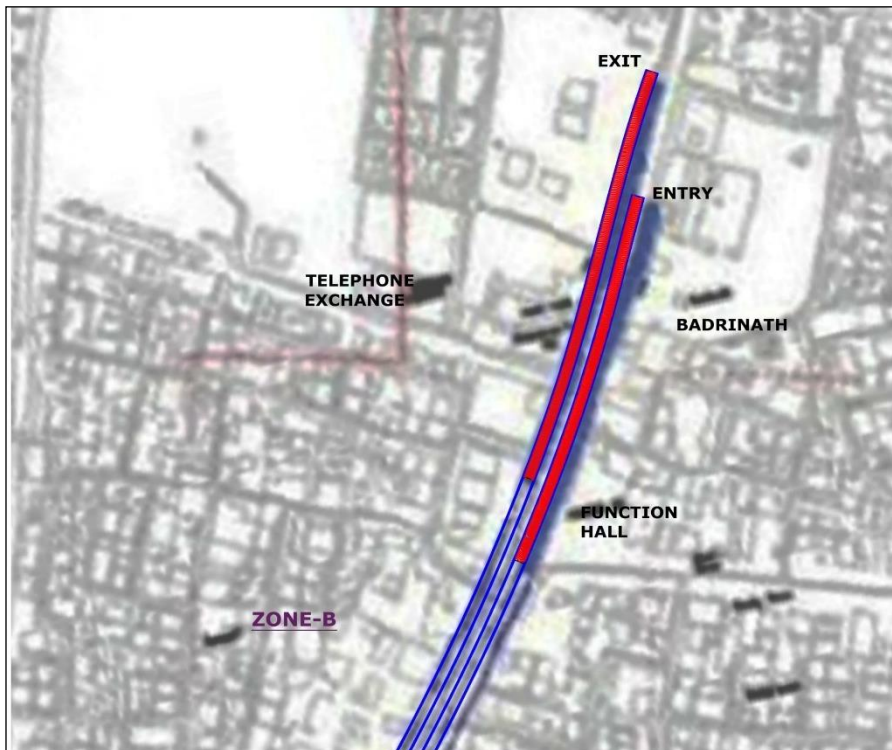


Fig 3 – Proposed schematic arrangement at Jorawar Singh Gate end

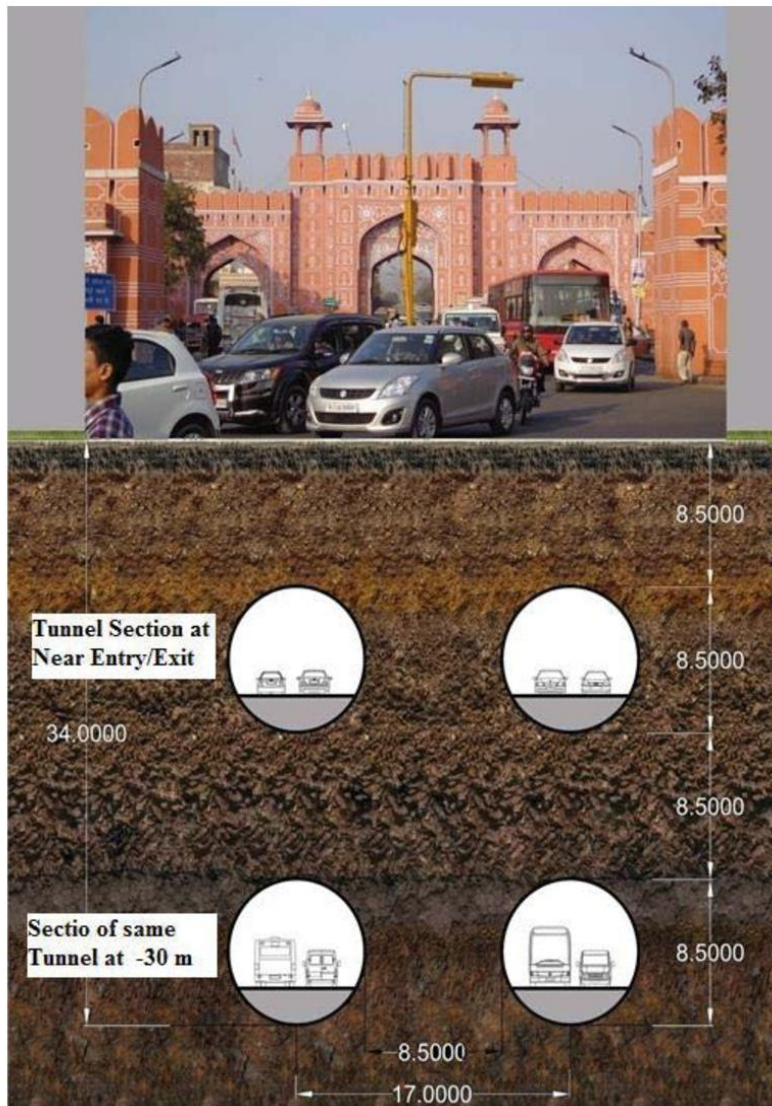


Fig 4 – Proposed schematic arrangement of Tunnel

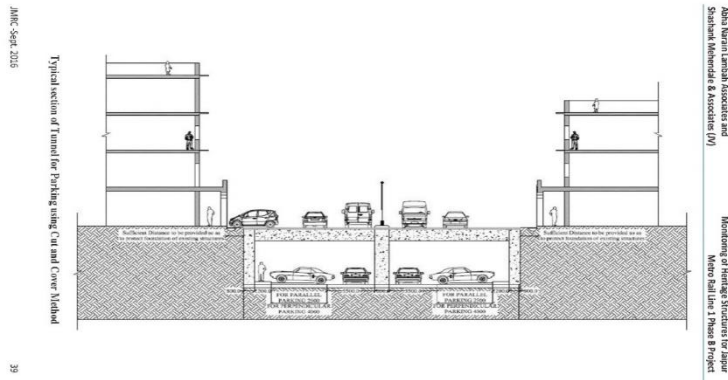


Fig 5 – Proposed schematic arrangement of parking at the Tunnel

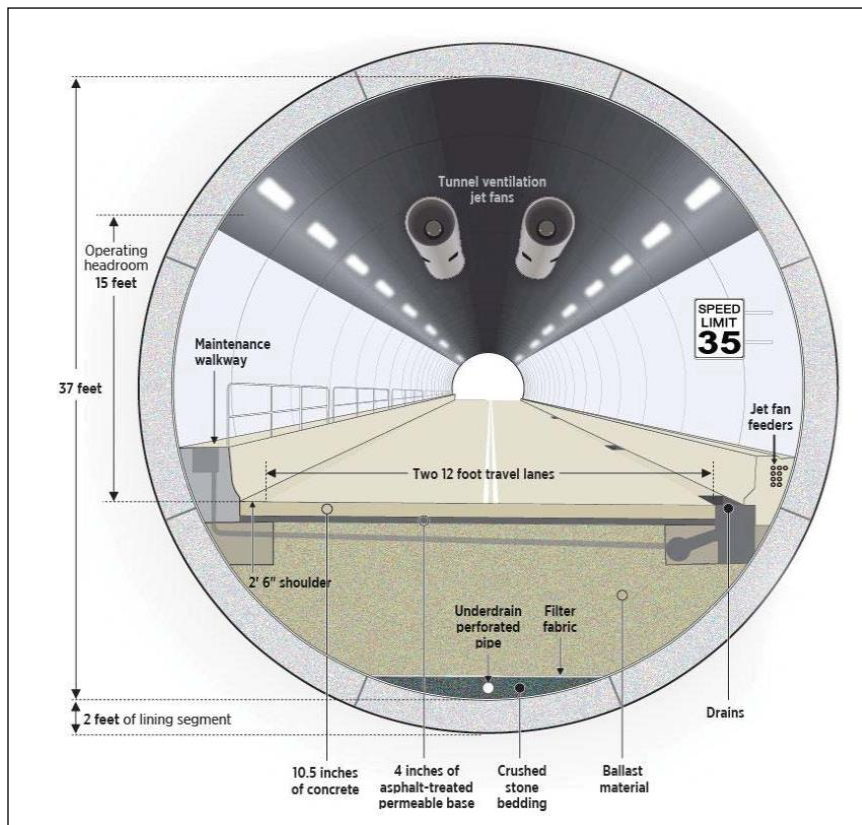


Fig 6 – Proposed schematic arrangement of Road in Tunnel

1.6 Jaipur Smart City Limited (JSCL) invites proposals from Technical Consultants for preparing Detailed Project Report for Integrated Subway from Sanganeri Gate to Zorawar Singh Gate and Parking below Johari Bazar stretch.

1.7 JSCL will be the employer and executing agency for the Consultancy Services sought and the standard of output required from the appointed Consultants are expected to be of international level both in terms of quality and adherence to the agreed time schedules.

2. Objective

2.1 The main objective of the consultancy service is to establish the technical, economical and financial viability of the project and prepare detailed project reports for construction of the proposed subway. So the selected Consultant would also have to interact with concerned agencies of State & Central government.

2.2 The viability of the project shall be established taking into account the requirements with regard to tunnel design, highway design, pavement design, ventilation, provision of entry and exit ramps, rehabilitation and widening of existing and/or construction of new bridges and structures, road safety features, quantities of various items of works and cost estimates and economic analysis.

2.3 The Detailed Project Report would, inter-alia, include detailed highway design, design of pavement and overlay with options for flexible or rigid pavements, design of bridges and cross drainage structures, electrical works and grade separated structures, quantities of various items, detailed working drawings, detailed cost estimates, economic and financial viability analyses, environmental and social feasibility, social and environmental action plans as appropriate and documents required for tendering the project on commercial basis for international / local competitive bidding.

2.4 The Consultant should ensure detailed project preparation incorporating aspects of value engineering, quality audit and safety audit requirement in design and implementation. Consultant should also ensure to include supplementary points for Safety Audit and Signs. Consultant should also provide technology options with respective costs in their report.

2.5 The Consultant should conduct financial analysis and suggest the preferred mode of implementation on which the Civil Works of the corridor is to be taken up. The Consultant should also give cost estimates and tender documents along with Detailed Project Report.

2.6 The proposals should be considered proper integration of entry and exit ramps with the existing road network. Necessary land acquisition can be considered. The Consultant shall furnish land acquisition details as per revenue records/maps for further processing of land acquisition. Consultant shall also submit 3a, 3A and 3D draft notification for acquisition of land. Scope of services includes all activities up to completion of the Land Acquisition process till 3G Notification as per LA Act of acquisition of land either under NH Act or corresponding action as per State Act, as applicable.

3.0 Scope of Services

- 3.1 The Consultant shall prepare proposals considering the heritage nature of the old city and also integrate with the existing road network with minimum disturbance. The Consultant shall furnish land acquisition details as per revenue records/maps for further processing of land acquisition. Consultant shall also submit 3a, 3A, and 3D draft notification for acquisition of land. Scope of services includes all activities upto completion of the Land Acquisition process till 3G Notification as per LA Act of acquisition of land as per applicable State/Central Act.
- 3.2 The Consultant shall study the possible locations and design of toll plaza if it is proposed to toll the subway. Dispersal of traffic at either end of the subway needs to be planned in careful manner integrating the same with the existing road network.
- 3.3 The general scope of services is given in the sections that follow. However, the entire scope of services would, inter-alia, include the items mentioned in the Letter of Invitation and the TOR. The Consultant will make suitable proposals for development of subway and parking subway, as required at the appropriate time to maintain the level of service over the design period. The Consultants shall prepare documents for EPC/PPP contracts for each DPR assignment.
- 3.4 All ready to implement 'good for tender drawings and designs' shall be prepared.
- 3.5 Environmental Impact Assessment, Environmental Management Plan and Rehabilitation and Resettlement Studies shall be carried out by the Consultant meeting the requirements of the lending agencies like ADB/ World Bank/JICA, etc.
- 3.6 Consultant *will obtain 'NO Objection Certificate' from Ministry of Environment and Forest and also facilitate to obtain the estimates for shifting of utilities of all types involved from concerned local authorities in the DPR. Consultant will also be required to prepare all Land Acquisition papers (i.e. all necessary schedule and draft 3a, 3A, and 3D, 3G notification as per L.A. act) for acquisition of land either under NH Act or corresponding action as per State Act (as applicable).*
- 3.7 Preparation of the Bid Documents, based on the feasibility report, due to exigency of the project for execution if desired by JSCL.
- 3.8 Consultant shall obtain all types of necessary clearances required for implementation of the project on the ground from the concerned agencies. The client shall provide the necessary supporting letters and any official fees as per the demand note issued by such concerned agencies from whom the clearances are being sought to enable implementation.
- 3.9 The Consultant shall prepare documents for the chosen mode of implementation like PPP or EPC after studying various options like BOT, Annuity and EPC.
- 3.10 The Consultant shall prepare the bid documents including required schedules as per EPC/ PPP / other mode etc. The Consultant shall assist the JSCL and its Financial Consultant and the Legal Adviser by furnishing clarifications as required for the financial appraisal and legal scrutiny of the project highway and bid documents.
- 3.11 The Consultant shall be guided in its assignment by the Model Agreement for Engineering, Procurement and Constructions (EPC)/ Model Concession Agreement for PPP (BOT/BOT (Annuity)/Hybrid) and the Manual of Specifications and Standards for four/ two lane of highways through Engineering, Procurement and Constructions (EPC) published by IRC (the "**Manual**") along with relevant IRC codes for design of tunnels.

4.0 General

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 Tunnels as per IRC guidelines or international standards like AASHTO shall be followed)

- i. Review of all available reports and published information about the project road and the project influence area;*
- ii. Environmental and social impact assessment, including such as related to heritage/cultural properties, natural habitats, 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. department at different stages of assignment (such as inception stage, feasibility stage, preliminary design stage and final design stage).***
- iii. detailed reconnaissance;*
- iv. identification of possible improvements in the proposed alignment in the feasibility study 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, heritage Structures and drainage provisions;*
- viii. Detailed topographic surveys using Total Stations, **GPS and LIDAR /any other equivalent technology.***
- ix. pavement investigations;*
- x. Sub-grade characteristics and strength: investigation of required sub-grade and subsoil characteristics and strength for road and embankment design and sub soil investigation; including scope for slope protection (wherever required) and remedial measures.*
- xi. identification of sources of construction materials;*
- xii. Detailed design of Tunnel/Subway, Parking Tunnel/subway, road, its x-sections, horizontal and vertical alignment and **design of embankment of height more than 6m and in poor soil conditions where density consideration requires, even lesser height embankment. Detailed design of structures including interchanges, 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 and financial analyses;*

- xvii. *contract packaging and implementation schedule;*
 - xviii. *strip plan indicating the scheme, 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/ transplating of trees and shifting of utilities from the concerned department;*
 - xix. **to find out financial viability of project for implementation and suggest the preferred mode on which the project is to be taken up;**
 - xx. **preparation of detailed project report, cost estimate, good for tender drawings and designs, rate analysis, detailed bill of quantities, bid documents for execution of civil works through budgeting resources;**
 - xxi. *design of toll plaza and identification of their numbers and location and office cum residential complex including working drawings;*
 - xxii. *any other user oriented facility, enroute toll facility;*
 - xxiii. *design of ventilation, lighting and electrical works in the subway/tunnel.*
 - xxiv. *preparation of social plans for the project affected people as per policy of the lending agencies/ Govt. of India R & R Policy;*
 - xxv. *safety Audit and signage;*
 - xxvi. *Technology options with respective costs.*
- 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.
- 4.3 The Consultant shall study the possible locations and design of toll plaza, wayside amenities required and plan for arboriculture along the highway.
- 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.

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 MORTH and relevant publications of the Indian Roads Congress (IRC) and Bureau of Indian Standards (BIS). For aspects not covered by IRC and BIS, international standards practices may be adopted. The Consultants, upon award of the Contract, may finalize this in consultation with JSCL 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.

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, investigation and design of bridges & structures, environment and R&R assessment, economic & financial analysis, 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 finalized with the concerned JSCL 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 JSCL before the Consultants start the field work.

4.7 Review of Data and Documents

1. 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. road inventory;
 - iii. road condition, year of original construction, year and type of major Maintenance/rehabilitation works;
 - iv. condition of *bridges and cross-drainage structures*;
 - v. *sub-surface and geo-technical data for existing bridges**;
 - vi. hydrological *data, drawings and details of existing bridges*;
 - vii. existing **geological maps, catchment area maps, contour plans etc. for the project area**;
 - viii. condition of existing river bank / protection works, if any;
 - ix. collection and review of details of heritage buildings and their plans
 - x. *survey and evaluation of locally available construction materials*;
 - xi. *historical data on classified traffic volume (preferably for 5 years or more)*;
 - xii. *origin-destination and commodity movement characteristics; if available*;
 - xiii. *speed and delay characteristics; if available*;
 - xiv. *commodity-wise traffic volume; if available*;
 - xv. *accident statistics*;
 - xvi. *Vehicle loading behaviour (axle load spectrum), if available*;
 - xvii. *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.)

xviii. Environmental setting and social baseline of the project.

Note: * Geo – Technical Studies can be outsourced through empaneled specialist whose name is appearing in the list of empaneled specialists of MoRTH.

4.8 Social Analysis

The social analysis study shall be carried out in accordance with the MORT&H/World Bank/ADB 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 diseases particularly HIV/AIDS poverty alleviation, gender, local population, industry, agriculture, employment, health, education, health, child labour, land acquisition and resettlement.

4.9 Traffic Surveys

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

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

- 2 The number of survey locations indicated in the table above is indicative only. The Consultants shall, immediately upon award of the work, submit to JSCL proposal regarding the total number as well as the locations of the traffic survey stations as part of inception report. Suitable maps and charts should accompany the proposal 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 finalized in consultation with JSCL.

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

requirement of traffic demand estimates and economic analysis:

- All results shall be presented in tabular and graphical form. The survey data shall be analyzed 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.

Motorised Traffic		Non-Motorised Traffic
	2 Wheeler	Bi-cycle
	3 Wheeler	Cycle Rickshaw
	Passenger Car	Animal Drawn Vehicle (ADV)
	Utility Vehicle (Jeep, Van etc.)	Hand Cart
		Other Non-Motorised Vehicle
Bus	Mini Bus	
	Standard Bus	
LCV	LCV - Passenger	
	LCV - Freight	
Truck	MCV: 2 Axle Rigid Chasis	
	HCV : 3 Axle Rigid Chasis	
	MAV : Semi Articulated	
	MAV : Articulated	

- 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 State PWD shall be suitably explained.

4.9.3 Origin-Destination and Commodity Movements Surveys

- The Consultant shall carry out 1-day (24 hour, both directions) O-D and Commodity Movement Surveys at locations finalized in consultation with JSCL. These will be essentially required around congested towns to delineate 'through traffic'. The roadside 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.
- 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.
- The trip matrices shall be worked out for each vehicle type information and 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 in a table and also in the graphical representations. The data derived from surveys shall also be analyzed 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.

4. The distribution of lead and load obtained from the surveys should be compared with those derived from the axle load studies.
5. The commodity movement data should be duly taken into consideration while making the traffic demand estimates.

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 JSCL officials. The proposal in response to this TOR shall clearly indicate the number of locations where the Consultant wishes to conduct turning movement surveys and the rationale for the same.
- 3 The data derived from the survey should be analyzed to identify requirements of suitable remedial measures, such as construction of underpasses, fly-overs, interchanges, grade-separated intersections along the project road alignment. Intersections with high traffic volume requiring special treatments either presently or in future shall be identified.

4.9.5 Axle Load Surveys

- 1 Axle load surveys in both directions shall be carried out at suitable location(s) in the project road stretch 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 finalized in consultation with JSCL. However, a few buses may be weighed in order to get an idea about their loading behaviour. 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 finalized 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.

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. 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, fly-overs, interchanges, grade-separated intersections and service roads.

4.9.7 Pedestrian Surveys

These may be conducted to understand and utilize for design of cross-sections.

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 behaviour 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 integrated tunnel/subway including underground parking project under this TOR would be completed and opened to traffic after 2 years. The traffic demand estimates shall be done for a further period of 30 years from completion of two 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 is estimated 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. Impact of toll charges on the traffic estimates should be estimated.
- 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.

4.11. Engineering Surveys and Investigations

4.11.1. Reconnaissance and Alignment

- 1 The Consultants should make an in-depth study of the available land width (ROW) topographic maps, satellite imageries and aerial 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 has to arrange the required maps and the information needed by them from the potential sources on their own. 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 road;*
 - iv. *existing heritage structures and their foundation details to be collated/collected and accordingly proposals to be formulated with out disturbing the heritage structures.*
 - v. *realignment requirements including the provision of Interchanges, Flyovers and via-duct for pedestrian crossings with possible alignment alternatives;*
 - vi. *preliminary identification of improvement requirements including treatments and measures needed for the cross-roads;*
 - vii. *traffic pattern;*
 - viii. *sections through congested areas; 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;*
 - 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.*
- 3 The data derived from the reconnaissance surveys are normally utilised 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 JSCL's comments. The data and the charts should also accompany the rationale for the selection of traffic survey stations.

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 responsible for any inaccuracy in surveys.
- 3 The detailed field surveys would essentially include the following activities:
 - i. Topographic Surveys along the Existing Right of Way (ROW): Running a continuous open Traverse along the existing road and realignments, wherever required, and fixation of all cardinal points such as horizontal intersection points (HIPs), 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 alignment and location of bridges/interchanges approved by JSCL.
 - iv. Collection of details for all features such as structures (bridges, culverts etc.) utilities, existing roads, 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 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 JSCL. 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 to 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 shall be transferred on to the ground as under:

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 Benchmark Pillar coincides with Reference Pillar, only one of the two need be provided.

- a. *Establishing Benchmarks at site connected to GTS Bench marks at an interval of 250 metres on Bench mark pillar made of RCC as mentioned above with RL and BM No. marked on it with red paint.*
- b. **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 project Highway at 50 m interval.*

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 cross sections at suitable distance both upstream and downstream, bed level up to 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").*

At feasibility study stage, cross sections at 200m interval may be taken.

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, sewers, gas/oil pipes, crossings, trees, plantations, utility services such as electric, and telephone lines (O/H & U/G) and poles, optical fibre 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.

4.11.3. Road and Pavement Investigations

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

4.11.3.1 Road Inventory Surveys

1. Detailed road inventory surveys shall be carried out to collect details of all existing road and pavement features along the existing road sections. The inventory data shall include but not limited to the following:
 - i. *terrain (flat, rolling, mountainous);*
 - ii. *land-use (agricultural, commercial, forest, residential etc) @ every kilometer;*

- iii. *carriageway width, surfacing type @ every 500m and every change of feature whichever is earlier;*
 - iv. *shoulder surfacing type and width @ every 500m and every change of feature whichever is earlier;*
 - v. *sub-grade / local soil type (textural classification) @ every 500m and every change of feature whichever is earlier;*
 - vi. *horizontal curve; vertical curve*
 - vii. *road intersection type and details, at every occurrence;*
 - viii. *retaining structures and details, at every occurrence;*
 - ix. *location of water bodies (lakes and reservoirs), at every occurrence;*
 - x. *height of embankment or depth of cut @ every 200m and every change of feature whichever is earlier;*
 - xi. *land width i.e. ROW;*
 - xii. *culverts, bridges and other structures (type, size, span arrangement and location);*
 - xiii. *Roadside arboriculture;*
 - xiv. *Existing utility services on either side within ROW;*
 - xv. *General drainage conditions;*
 - xvi. *Design speed of existing road.*
3. 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.

4.11.3.2 Pavement Investigation

4.11.4 Investigations for Bridges and Structure

4.11.4.1 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 which will have impact on the subway proposal. The inventory for the bridges, viaducts and ROBs shall include the parameters required as per the guidelines of IRCSP:35. The inventory of culverts shall be presented in a tabular form covering relevant physical and hydraulic parameters.

4.11.4.2 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.
2. The Consultant shall also collect information on observed maximum depth of scour.

3. In respect of major bridges, history of hydraulic functioning of existing bridge, if any, under flood situation, general direction of river course through structure, afflux, extent and magnitude of flood, effect of backwater, if any, aggradations/degradation of bed, evidence of scour etc. shall be used to augment the available hydrological data. The presence of flood control/irrigation structures, if affecting the hydraulic characteristics like causing obliquity, concentration of flow, scour, silting of bed, change in flow levels, bed levels etc. shall be studied and considered in design of bridges. The details of any future planned work that may affect the river hydraulics shall be studied and considered.
4. The Consultants shall make a desk study of available data on topography (topographic maps, stereoscopic aerial photography), storm duration, rainfall statistics, top soil characteristics, vegetation cover etc. so as to assess the catchment areas and hydraulic parameters for all existing and proposed drainage provisions. The findings of the desk study would be further supplemented and augmented by a reconnaissance along the area. All important hydrological features shall be noted during this field reconnaissance.
5. The Consultants shall collect information on high flood level (HFL), low water levels (LWL), high tide level (HTL), low tide level (LTL) where applicable, discharge velocity etc. from available past records, local inquiries and visible signs, if any, on the structural components and embankments. Local inquiries shall also be made with regard to the road sections getting overtopped during heavy rains.
6. Conducting Model studies for bridges is not covered in the scope of consultancy services. If Model study is envisaged for any bridge, requirement of the same shall be spelt out in the RPF documents separately indicating scope and time frame of such study. Salient features of the scope of services to be included for model study are given in the supplement-II Terms of Reference.

4.11.4.3 Condition Surveys for Bridges, Culverts and Structures

1. The Consultants shall thoroughly inspect the existing structures 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.
3. The assessment of the load carrying capacity or rating of existing bridges shall be carried out under one or more of the following scenarios:
 - i. *when the design live load is less than that of the statutory commercial vehicle plying or likely to ply on bridge;*
 - ii. *if during the condition assessment survey and supplementary testing the bridge is found to indicate distress of serious nature leading to doubt about structural and / or functional adequacy, and*

- iii. *design live load is not known nor are the records and drawings available.*
4. The evaluation of the load carrying capacity of the bridge shall be carried out as per IRC-SP:37 (“Guidelines for Evaluation of Load Carrying Capacity of Bridges”). The analytical and correlation method shall be used for the evaluation of the load carrying capacity as far as possible. When it is not possible to determine the load carrying capacity of the bridge using analytical and correlation method, the same shall be carried out using load testing. The Consultant has to exhaust all other methods of evaluation of strength of bridges before recommending to take up load testing of bridges. Road closure for testing if unavoidable shall be arranged by JSCL for limited duration say 12 hrs. or so.
5. Consultant shall carryout necessary surveys and investigations to establish the remaining service life of each retainable bridge or structure with and without the proposed strengthening and rehabilitation according to acceptable international practice in this regard.

4.11.4.4 Geo-technical Investigations and Sub-Soil Exploration

A. Tunnels

General

- A.I Preparation of the site investigation programmed detailing
 - a. Method to be used to investigate the geology of the ground along the alignment.
 - b. Various lab & field tests to be conducted, including the numbers of such tests as well as specifying method of sample collection, sample preparation, testing and recording procedures of test results.
 - c. The main focus of the investigation will be targeted on the:
 - i. Bedrock condition, material properties, permeability, weathering.
 - ii. Discontinuities, orientation, spacing, persistency, surface properties and infilling
 - iii. Assessment of ground conditions
 - iv. Identification and characterization of fault zones by morphological and structural appearances
 - d. Preparation of a geological surface and geological factual report (GFR) under which summarizes all results from the site investigations, including all lab and field tests as well as all the structural data from geological surface mapping and site walk over survey.
 - e. Preparation of a geological and geotechnical interpretative report (GIR) which includes a detailed analysis and interpretation of data contained in the above mentioned geological and geotechnical factual report (GFR) culminating in the development of a geological model of the ground within the route corridor. The geological model will be created on the basis of direct interference from surface mapping, groundwater chemical studies, petrographical studies, and

mineralogical studies as well as the reasonable and appropriate extrapolation of the geology and structures from the results of surface mapping.

Based on the geological model, geotechnical hazards shall be identified and characterized allowing the most favorable alignment to be selected.

The geological model will be presented in the form of a geological longitudinal section (Drawing scale 1: 1 0000, A3 size) clearly demarcating the various interred lithological boundaries and ground types along the alignment, the groundwater conditions permeability and relevant structural information such as the width of fault zones, shear zones and lineaments/discontinuities with attitude and orientation

- f. Engage a specialist agency to acquire high resolution three dimensional stereo-paired satellite imagery, minimum required GSD (Ground Sample Distance) should be 50 cm, of the tunnel corridor. State of the art digital processing techniques using predictive analytics shall then be used to process the high resolution satellite images to obtain a digital elevation model (DEM) and overlay of topographical contours to produce accurate topographical and geomorphologic maps.

The satellite imagery shall be acquired for an area of not less than 66 Square Kilometers, covering the entire route corridor. Results of the satellite image acquisition and consequent geospatial processing shall be presented in the form of high resolution photographs (size A3), topographical maps (Scale 1: 10000, 5 m contour interval for overall route corridor, and scale 1 :5000, 2 m contour interval for the portal sites).

The satellite images will be carefully evaluated to identify faults and other significant lineaments. Information received from these maps should be utilized in portal and shaft design, site access, right of way, drainage, depth of cover and geologic interpretation and other studies. Original purchase receipts of such digital maps should be submitted to the Authority by the consultant

- g. Service Component II Preparation of Detailed Project Report (DPR) and Drawings

A.2 The Scope of service involves:

- i. Feasibility study of the tunnel alignment and the method of evaluation.
- ii. Detailed Project Report (DPR) based on basic design etc.

The DPR will enumerate on the following salient features:

- Determination of the seismic potential along the route corridor
- Determination of flash flood and land slide potential at both the portals and along transportation routes.

- Preliminary traffic survey
- Identification of quarry sites for construction material
- Identification of muck dump sites

- Portal cut design
 - Route selection of three alternative tunnel alignments
 - Tunnel cross section design (preliminary)
 - Construction concept
 - Ventilation concept
 - Fire and life safety concept
 - Permanent drainage concept
 - Construction Program & Schedule
-
- Infrastructure facilities including power requirements

Submit details of 3 Nos. alternative proposed alignments. Out of which one will be recommended to authority.

1. Preparation of Land Plan Schedules and Utility Relocation Plans
2. Preparation of indicative BOQ based on basic design and detailed Cost Estimates
3. To carry out the DPR preparation of Tunnel Project following services briefly explained hereunder will be carried out:

PART-I

4 Taking out water samples and doing chemical analysis to determine the aggressiveness of the water to concrete complete.

5 Determination of seismic coefficient for safe design of structures

6 Drawing up preliminary proposals for support systems, blasting and mucking operations (disposal method of muck also to be examined and specified) different types of lining, water proofing membrane, drain pipes etc.

1. Topographical and geological studies comprising of the following major areas of investigation:
 - a. General geology, structural data, Engg. Geology, description of ground pattern, salinity and coefficient of permeability.
 - b. Topographical survey and mapping, structural and stratographical maps, Isopak maps, preparation of cross sections. (Quantum of survey shall be as per relevant Indian Standard (IS Code) or international Code (s) for highway tunnels.
 - c. Rock mass property, rock stresses, ground water conditions, geothermal ground gradient, inflammable gases, rock model and rock mass behavior. (It involves interpretation of sample data of obtained from drilling bores as specified in Phase I, Part II. However, interpretation has to be generated/extrapolated for the entire alignment of tunnel).
 - d. Photo-geological and remote sensing studies, geomorphological studies, geo-physical studies of the site for the tunnels, obtaining/acquiring high resolution three dimensional stereopaired satellite imagery with minimum required GSD (Ground Sample Distance 50 cm).
2. Ground marking of alignment and report on tentative tunnel alignment, section,

- grade, portal positions and finding altitude and grid reference of the portal.
3. Survey and evaluation of construction materials including water with reference to relevant IS codes.
 4. Taking out water samples and doing chemical analysis to determine the aggressiveness of the water to concrete complete.
 5. Determination of seismic coefficient for safe design of structures.
 6. Drawing up preliminary proposals for support systems, blasting and mucking operations (disposal method of muck also to be examined and specified) different types of lining, water proofing membrane, drain pipes etc.,
 7. Formulation of conceptual designs and a preliminary alternative, sections for the tunnel along with broad indications of construction methods including alignment and ventilation arrangements both temporary and permanent. Comparative economic and technical studies for two independent tubes, each having two lane width will be covered in study as per the economic and financial study.
 8. **PART -2:** Induction of a complete drilling equipment and complete set of accessories including water pumps etc. required for the job at the tunnel site (bore hole location) in good serviceable condition for the first time including its de-induction after completion of all works
 9. Shifting of a complete drilling equipment and complete set of accessories including water pumps etc. required for the job from one bore hole location to the other at proposed tunnel site
 10. Drilling four (04) vertical holes (core drilling) one at each portal sites & at approximately one third and two third distances between portal measured along the proposed tunnel alignment from any portal end down to the tunnel grade which may involved diamond drilling using NX-Bits to the extent of 400 metres for an individual hole. Additional holes if required in this area shall be undertaken by BXBits, if unavoidable, will be resorted to only with prior approval of the department.
 11. Drilling four (4) Inclined holes (core drilling) at an angle of 30 degrees (Approx) with vertical, one at 50 mtr distance & another at 100 mtr distance from each portal sites measured along the proposed Tunnel alignment down to the tunnel grade which may involved diamond drilling using NX-Bits to the extent of 400 meters for an individual hole. The inclined drill holes must intersect the proposed tunnels cross section at tunnel grade level. Additional holes if required in this area shall be undertaken. BX-Bits, if unavoidable, will be resorted to only with prior approval of the department.
 12. Submission of reports under Part-1 & Part-2 of Phase-I covering all above information under Phase-I including preliminary indication of cost for the Project and recommendation for further detailed studies

Notes:

1. Core recovery in bed rock portions shall not be less than 80% for hard rock in general. However the percentage of core-recovery may vary with the type of rock encountered for which the minimum percent recovery will be guided by relevant code provisions. Drilling activity to includes the followings:

- a) Boring holes and carrying out all relevant tests for ascertaining rock properties. This includes geological logging, electrical logging, geothermal logging and Geo-hydrological logging of bore holes.
 - b) Determination of in-situ stress field by over coring methods or any other techniques available such as hydro-fracture technique.
 - c) Water percolation tests are to be conducted in the hole at ground level, at every six metre depth intervals, at proposed tunnel grade level and at the junction of different lithological strata at three different pressures as per relevant IS Codes.
 - d) Any deviation of holes from verticality is to be actually measured accurately and reflected.
- 2 (a) Bore hole locations and their depths are indicated as guide lines only. Final locations, their dimensions, choice of field tests and their interval, choice of drilling equipment, establishing the correct procedure for drilling, sampling and field tests including any additional holes are to be suitably modified with approval of department.
- 2(b) The phase I report is to bring out clearly the technical and other problems that may be encountered during the construction and maintenance of the tunnel and also clear recommendations regarding the feasibility of the tunnel in the prevailing conditions. Final portal locations, tunnel sections and geometrics to be defined in this report. The technical consultant is required to validate the PPR study on the ground and clearly bring out the deviations, if any, with regard to the portal locations, tunnel sections and geometrics based on the his study and investigation.
- 2 (c) Preliminary indications of cost of the tunnel project and the time involved for the construction to be indicated. In short, phase I report should be self explanatory to enable the department to take a decision regarding feasibility of the tunnel, expertise available within the country for construction and firm and detailed costs for purposes of getting Administrative Approval for the works. This report should also bring out other detailed studies involved at pre-construction stage, construction stage and post construction stage.

Note -Phasing of this work has been done based on past experience of feasibility studies.

Framing and submission of report covering all the following aspects:

- a. Preparation of preliminary design and schedule of quantities
- b. Study and analysis of working faces, tunneling method, cost analysis and types of equipment's for various operations such as drilling, blasting, mucking, haulage and disposal of muck, fire-fighting, extrication of poisonous gases, ventilation, lighting, side cover, power and water supply systems etc. Possibilities of using TBM are to be evaluated with specific limitations
- c. Engineering studies pertaining to leakage, de-watering, grouting, blasting, ground acceleration due to blasting, tunnel closures support system etc.
- d. Tentative constructions schedule including critical path analysis
- e. Listing of various codes of practice both Indian and Foreign applicable
- f. Preparation and submission of Phase II report covering all the aspects of studies

and recommendations listed and specified at S.No. (a) to € of Schedule – A Phase II above.

B: Highways

- 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.NO.	Description	Location of boring
1	Overall length = 6-30 m	One abutment location and at least one intermediate location between abutments for structures having more than one span
2	Overall length = 30-60 m	One abutment location and at least one intermediate location between abutments for structures having more than one span.
3	Overall length >60 m	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 JSCL.
- 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 JSCL 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 and other relevant IRC codes.
- 5 The scheme for the borings locations and the depth of boring shall be prepared by the Consultants and submitted to JSCL for approval. These may be finalised in consultation with JSCL.
- 6 The sub-soil exploration and testing should be carried out through the Geotechnical Consultants empaneled by MORT&H. 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

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 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 byproducts, 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 leveling 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 MORTH specification.

4.11.6 Mapping of Heritage structures

Detailed mapping of the heritage structures along the proposed alignment of the integrated tunnel/subway along with parking. The depth and foundation details of the heritage structures and other major development need to be collected/collated. This will be necessary to understand the existing underground features and propose the tunnel/subway accordingly. For collection of underground features and utilities GPR

(Ground Penetration Radar) surveys and other relevant methods need to be deployed.

4.12 Detailed Design of Road and Pavements, Bridges, Structures

4.12.1. General

1. The Consultants are to carry out 'good for tender' designs and drawings for the following:
 - i. *high speed Tunnel/Subway with divided carriageway configuration complete in all respects*
 - ii. *Design of underground parking*
 - iii. *Ventilation design for the Tunnel and underground Parking*
 - iv. *Lighting design for the Tunnel and underground parking*
 - v. *design of pavement for the additional lanes and overlay for the existing road, paved shoulders, medians, verges;*
 - vi. *bridges, viaduct/subways and other grade separated structures including ROBs/RUBs etc.;*
 - vii. *at-grade and grade-separated intersections, interchanges (if required);*
 - viii. *prepare alignment plans, longitudinal sections and cross-sections @ 50m intervals;*
 - ix. *designs for road furniture and road safety/traffic control features;*
 - x. *toll plazas and office-cum-residential complex for JSCL;*
 - 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. *Design of pavement for approach road*
 - xv. *Design of safety features as per the codal provisions for Tunnels and subways.*
 - xvi. *Innovative type of structures with minimum joints, aesthetically, pleasing and appropriate to the topography of the region shall be designed wherever feasible.*

4.12.2. Design Standards

- 1 The Consultants shall evolve Design Standards and material specifications for the Study primarily based on IRC publications, MORTH Circulars and relevant recommendations of the international standards for approval by JSCL.
- 2 The Design Standards evolved for the project shall cover all aspects of detailed design including the design of tunnel, underground parking structures, the design of geometric elements, pavement design, bridges and structures, interchanges, ventilation, lighting, traffic safety and materials.

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 and workout the traffic flow capacity for the improved project road. 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 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.
 - 8 The Consultant shall prepare complete road and pavement design including drainage.

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. *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 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 2-lane 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.

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 flyash 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 than 6 m based on relevant IRC publications.
3. *The design of embankments should include the requirements for protection works and traffic safety features.*

4.12.6. Design of Bridges and Structures

1. The data collected and investigation results shall be analysed to determine the following :
 - i. HFL
 - ii. LWL
 - iii. LBL
 - iv. Erodible 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 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 JSCL to approve the best alternative. After approval of alignment and GAD the Consultant shall prepare detailed design as per IRC codes /guidelines and working drawings for all components of bridges and structures.
3. GAD for bridges/structures across irrigation/water way channels shall be got approved from the concerned Irrigation/Water way Authorities. Subsequent to approval of GAD and alignment plan by JSCL the Consultants shall prepare detailed design as per IRC codes/guidelines for all components of the bridges and structures.
4. Subsequent to the approval of the GAD and Alignment Plan by JSCL, the Consultant shall prepare detailed design as per IRC 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.
5. 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.
6. The existing structures having inadequate carriageway width shall be

widened/reconstructed in part or fully as per the latest MORTH guidelines. The Consultant shall furnish the detailed design and working drawings for carrying out the above improvements.

7. 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.
8. Subsequent to the approval of the GAD and the alignment plan by JSCL, detailed design shall also be carried out for the proposed underpasses, overpasses and interchanges.
9. The Consultants shall also carry out the design and make suitable recommendations for protection works for bridges and drainage structures.
10. In case land available is not adequate for embankment slope, suitable design for RCC retaining wall shall be furnished. However, RES wall may also be considered depending upon techno-economic suitability to be approved by JSCL.

4.12.7. Drainage System

- 1 The requirement of roadside drainage system and the integration of the same with proposed cross-drainage system shall be worked out for the entire length of the project road section.
- 2 In addition to the roadside drainage system, the Consultants shall design the special drainage provisions for sections with super-elevated carriageways, high embankments and for road segments passing through cuts. The drainage provisions shall also be worked out for road segments passing through urban areas.
- 3 The designed drainage system should show locations of turnouts/outfall points with details of outfall structures fitting into natural contours. A separate drawing sheet covering every 5 km. stretch of road shall be prepared.

4.12.8. Traffic Safety Features, Road Furniture and Road Markings

The Consultants shall design suitable traffic safety features and road furniture including traffic signals, signs, markings, overhead sign boards, crash barriers, delineators etc. The locations of these features shall be given in the reports and also shown in the drawings.

4.12.9. 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.

4.12.10. Toll Plaza

- 1 The Consultants shall identify the possible toll plaza location(s) based on the data and information derived from the traffic studies and a study of the existing physical features including the availability of land. The location of the plaza should keep in view that the project road is to be developed as a partially access controlled highway facility and it is required to collect toll on rational basis from as much of the vehicular traffic as possible consistent with economy of collection and operations. The location of the toll plaza should be finalised in consultation with JSCL.
- 2 Toll Plaza shall be designed as per IRC 84 and other relevant codes.

4.12.11. Parking Areas and Rest Areas

The Consultant shall design proposed tunnel /subway parking areas and rest areas and prepare suitable separate designs in this regard. Necessary revenue generation methods also can be proposed and options for the same to be developed.

4.12.12 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.

4.13 Environment and Social Impact Assessment

The Consultant shall under take the detailed environmental and social impact assessment in accordance with the standard set by the Government of India for projects proposed to be funded by JSCL. In respect of projects proposed to be funded by ADB loan assistance, Environmental Assessment Requirements, Environmental Guidelines for selected infrastructure projects, 1993 of Asian Development Bank shall be followed. Similarly, for projects proposed to be funded by World Bank loan assistance, World Bank Guidelines shall be followed.

4.13.1 Environmental Impact Assessment

Environment impact assessment or initial environment examination be carried out in accordance with ADB's Environmental Assessment Requirements of ADB 1998 guidelines for selected infrastructure projects 1993 as amended from time to time /World Bank Guidelines / Government of India Guidelines, as applicable

1. The Consultant should carry out the preliminary environmental screening to assess the direct and induced impacts due to the project.
2. The Consultant shall ensure to document baseline conditions relevant to the project with the objective to establish the benchmarks.
3. The Consultant shall assess the potential significant impacts and identify the mitigation measures to address these impacts adequately.
4. The Consultant shall do the analysis of alternatives incorporating environmental

- concerns. This should include with and without scenario and modification incorporated in the proposed project due to environment considerations.
5. The Consultant shall give special attention to the environmental enhancement measures in the project for the following:
 - a. Cultural/heritage property enhancement along the highways,
 - b. Highway side landscape and enhancement of the road junctions,
 - c. Enhancement of highway side water bodies, and
 - d. Redevelopment of the borrow areas located on public land.
 6. The Consultant shall prepare the bill-of-quantities (BOQ) and technical specifications for all items of work in such a way that these may be readily integrated to the construction contracts.
 7. The Consultant shall establish a suitable monitoring network with regard to air, water and noise pollution. The Consultant will also provide additional inputs in the areas of performance indicators and monitoring mechanisms for environmental components during construction and operational phase of the project.
 8. The Consultant shall provide the cost of mitigation measures and ensure that environmental related staffing, training and institutional requirements are budgeted in project cost.
 9. The Consultant shall prepare the application forms and obtain forestry and environmental clearances from the respective authorities including the SPCBs and the MOEF on behalf of JSCL/MORT&H. The Consultants will make presentation, if required, in defending the project to the MOEF Infrastructure Committee.
 10. The Consultant shall identify and plan for plantation and Transplantation of the suitable trees along the existing highway in accordance with IRC guidelines.
 11. The Consultant shall assist in providing appropriate input in preparation of relevant environment and social sections of BPIP.

4.13.2 Social Assessment

- 1 The Consultant would conduct base line socio-economic and census survey to assess the impacts on the people, properties and loss of livelihood. The socioeconomic survey will establish the benchmark for monitoring of R&R activities. A social assessment is conducted for the entire project to identify mechanisms to improve project designs to meet the needs of different stakeholders. A summary of stake holders discussions, issue raised and how the project design was developed to meet stakeholders need would be prepared.
- 2 The Consultant shall prepare Land Acquisition Plan and assist JSCL in acquisition of land under various Acts.

4.13.2.3 The Consultant would prepare Resettlement and Rehabilitation Plan –assess feasibility and effectiveness of income restoration strategies and suitability and availability to relocation sites. The resettlement plan which accounts for land acquisition and resettlement impacts would be based on a 25% socioeconomic survey and 100 % census survey of project affected people which provides the complete assessment of the number of affected households and persons,

including common property resources. All untitled occupants are recorded at the initial stages and identify cards will be issued to ensure there is no further influx of people in to the project area. All consultations with affected persons (to include list of participants) should be fully documented and records made available to JSCL.

- Assessment on the impact of the project on the poor and vulnerable groups along the project road corridor.
- Based on the identified impacts, developing entitlement matrix for the project affected people.
- Assessment on social issues such as indigenous people, gender, HIV/AIDS, labourers including child labour.
- Implementation budgets, sources and timing of funding and schedule of tasks.
- Responsibility of tasks, institutional arrangements and personnel for delivering entitlement and plans to build institutional capacity.
- Internal and external Monitoring plans, key monitoring indicators and grievance redress mechanism.
- Incorporating any other suggestions of JSCL, till the acceptance of the reports by the JSCL, as applicable.

4.13.3 Reporting Requirements of EIA

The Consultant would prepare the stand-alone reports as per the requirement of the ADB/World Bank / JSCL, 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 JSCL, till the acceptance of the reports by the JSCL, 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 afforestation 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 JSCL, till the acceptance of the reports by the JSCL as applicable.

4.13.4 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, 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

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

MORTH's 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.

- 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 JSCL projects are to be checked against rates for similar on-going works in Rajasthan road sector projects.

6. Viability and Financing Options

- 1 The economic and commercial analysis shall be carried out for the combined Project and separately to Tunnel/Subway from Sanganeri Gate to Jorawarsingh gate and Underground parking below Johri Bazar.
- 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 JSCL.
- 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 JSCL.

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. *assess the capacity of existing roads and the effects of capacity constraints on vehicle operating costs (VOC);*
 - ii. *calculate VOCs for the existing road situation and those for the project;*
 - iii. *quantify all economic benefits, including those from reduced congestion, travel distance, road maintenance cost savings and reduced incidence of road accidents; and,*
 - iv. *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.*
 - v. *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.

6.2. Financial Analysis

- 1 It is envisaged that the project stretch should be implemented on EPC/BOT basis, therefore, the Consultant shall study the financial viability of the project under a commercial format and under different user fee scenarios and funding options. The Consultants shall submit and finalise in consultation with the JSCL officers the format for the analysis and the primary parameters and scenarios that should be taken into account while carrying out the commercial analysis. The financial model so developed shall be the property of JSCL.
- 2 The Financial analysis for the project should cover financial internal rate of return, projected income statements, balance sheets and fund flow statements and should bring out all relevant assumptions. The sensitivity analysis should be carried out for a number of probabilistic scenarios.
- 3 The financial analysis should cover identification, assessment, and mitigating measures for all risks associated with the project. The analysis shall cover, but be not limited to, risks related to 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 Consultant shall suggest positive ways of enhancing the project Viability and furnish different financial models for implementing on BOT format.

7. Time period for the service

- 1 Time period envisaged for the study of the project is indicated in **LOI (Enclosure -III of TOR)**. The final reports, drawings and documentation shall be completed within this time schedule.
- 2 JSCL 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. 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 client's assessment.
- 3 A Manning Schedule for key personnel mentioned above is enclosed as **Enclosure I** along with broad job- description and qualification as **Enclosure II**.

The information furnished in Enclosures I & II are to assist the Consultants to understand the client's perception about these requirements and shall be taken by the Consultants for the purpose of Financial Proposal and deployment schedule etc. in technical proposal to be submitted by them. Any deviation proposed may be recorded in the comments on TOR. All the key personnel mentioned will be evaluated at the time of evaluation of technical 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 as mentioned in Data sheet. 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 authorized signatory of the Consultants.

- 4 The Consultants shall establish an office at the project site manned by senior personnel during the course of the surveys and investigations. All the project related office work shall be carried out by the Consultant in their site office unless there are special reasons for carrying out part of the office work elsewhere for which prior approval of JSCL shall be obtained. The address of the site office including the personnel manning it including their Telephone and FAX numbers will be intimated by the Consultant to JSCL before commencement of the services.
- 5 The Consultant shall maintain an Attendance Register to be signed by each individual key personnel at site as well as at Head Office. The Consultant shall furnish certificate that all the key personnel as envisaged in the Contract Agreement have been actually deployed in the Projects at the time of submission of their bills to the JSCL from time to time.

9. Reports to be submitted by the Consultant to JSCL

- 9.1 All reports, documents and drawings are to be submitted for 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.
- 9.2 Project preparation activities will be split into three stages as brought out below. Preliminary design work should commence without waiting for feasibility study to be completed.

Stage 1: Inception Report

Stage 2: Feasibility Report

Stage 3: Detailed Project Report (DPR)

- 9.3 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 client, all the different stages of study within the time frame indicated in the schedule of submission in para 10 pertaining to Reports and Documents for becoming eligible for payment for any part of the next stage.

10 Reports and Documents to be submitted by the Consultant to JSCL

- 1 The Consultant shall submit to the client 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 hardcopies 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.l.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 Sl.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 construction package (Section) simultaneously. As far as possible, the proposal should include complete information such as number of such persons, name, position, period of engagement, remuneration rate etc. 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

10.1 Quality Assurance Plan (QAP) Document

- 1 Immediately upon the award, the Consultants shall submit four copies of the QAP document covering all aspects of field studies, investigations design and economic financial 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 geotechnical and sub-soil investigations, road and pavement investigations, investigation and design of bridges & structures, environment and R&R assessment, economic & financial analysis, drawings and documentation; preparation, checking, approval and filing of calculations, identification and traceability of project documents etc. Further, additional information as per format shall be furnished regarding the details of personnel 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 field and design activities shall start after the QAP is approved by JSCL.
- 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 JSCL.

10.2 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 JSCL 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. *Development plans being implemented and / or proposed for implementation in the near future by the local bodies and the possible impact of such development plans on the overall scheme for field work and design for the study;*
 - ix. *Quality Assurance Plan (QAP) finalised in consultation with JSCL;*
 - x. *Draft design standards; and*
2. The available alignment options should be worked out on the basis of available maps. The most appropriate alignment option should be identified on the basis of site conditions and techno-economic considerations.

STAGE 2:

10.3 Feasibility Report

- 1 The Consultant shall commence the Feasibility Study of the project in accordance with the accepted IR and the report shall contain the following:
 - *Executive summary*
 - *Overview of JSCL organization and activities, , and project financing and cost recovery mechanisms*
 - *Project description including possible alternative alignments/bypasses and technical/engineering alternatives*
 - *Methodology adopted for the feasibility study*
 - *Socioeconomic profile of the project areas*
 - *Indicative design standards, methodologies and specifications*
 - *Traffic surveys and analysis*
 - *Environmental screening and preliminary environmental assessment*
 - *Initial social assessment and preliminary land acquisition/resettlement plan*
 - *Cost estimates*
 - *Economic and financial analysis*

- *Conclusions and recommendations*
- 2 In view of para 1 above the Consultant has to submit the following documents in six sets :
 - i. **Technical Specifications:** *The MORTH's Technical Specifications for Road, Tunnel 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 MORTH Specifications for Roads, Tunnels and Bridges (latest edition / revision) and also specific quality control norms for the construction of works.*
 - ii. **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.*
 - iii. **Cost Estimates:** *This volume will present the each item of work as well as a summary of total cost.*
 - iv. **Bill of Quantities:** *This volume shall contain the detailed Bill of Quantities for all items of works*
 - v. **Civil Work Contract Agreement:** *A civil works contract agreement shall be submitted.*
 - 3 The basic data obtained from the field studies and investigations shall be submitted in a separate volume as an Appendix to Feasibility Report.
 - 4 The Final Feasibility Study Report incorporating comments, revisions and modifications suggested by JSCL shall be submitted within 15 days of receipt of comments from JSCL on draft feasibility study report.

10.4 Strip Plan and Clearances

- 1 The Consultants shall submit the following documents:
 - i. *Details of the centre line of the proposed widened of 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. *Details for various clearances such as environment and forest clearances;*
 - v. *Separate strip plan showing shifting / relocation of each utility services in consultation with the concerned local authorities;*
 - vi. *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;

- vii. *Detail schedules for acquisition of additional land and additional properties in consultation with the revenue authorities; and*
 - viii. *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. *Kilometre-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. *Kilometre-wise Utility Relocation Plan (URP) and costs for relocation per civil construction package as per concerned authorities.*
 - iv. *Kilometre-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 concerned State PWDs 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 JSCL.
 - 5 Kilometre-wise Strip Plans for section (Package) shall be prepared separately for each concerned agency and suggested by JSCL.

10.5 Land Acquisition Report

1. The Land acquisition report shall be prepared and submitted for the entire stretches under the Assignment. The report shall include detailed schedules about acquisition of landholdings 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 proforma to be supplied by JSCL. 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 organisations and concerned government agencies and should cover land acquisition and resettlement plans and costs of resettlement and rehabilitation of such affected persons. It should also include plans of compensatory afforestation, its land requirements with specific locations and cost involved for undertaking all such activities in this regard. The Land Acquisition report shall cover all submissions as required for issuance of Notification u/s 3(a), 3(A), 3(D) & 3 (G) alongwith all details as necessary for Forest / Environmental / Wild Life clearances.

STAGE: 3

10.6 Draft Detailed Project Report (DPR)

- 1 The draft DPR Submission shall consist of construction package-wise Main Report, Design Report, Materials Report, Engineering Report, Drainage Design Report, Economic and Financial Analysis Report, Environmental Assessment Report including Resettlement Action Plan (RAP), Package-wise bid Documents and Drawings.
- 2 The Report volumes shall be submitted as tabulated in para 10 above.
- 3 The Documents and Drawings shall be submitted for the Package and shall be in the following format:

Reports

1 Volume-I, Main Report: *This report will present the project background, social analysis of the project, details of surveys and investigations carried out, analysis and interpretation of survey and investigation data, traffic studies and demand forecasts designs, cost estimation, environmental aspects, 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 Environmental Impact Assessment (EIA) Report for contract package shall be submitted as a part of the main report.

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.

2 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 with the design of road features and pavement composition while Part-II shall deal with the design of bridges, tunnels 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.

3 Volume - III, Materials Report: *The Materials Report shall contain details concerning the proposed borrow 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 stabilisation (cement, lime, mechanical) should be included in the Report.

- 4 **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.
- 5 **Volume - V, Technical Specifications:** The MoRT&H's Technical Specifications for Road, Tunnels 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.
- 6 **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.
- 7 **Volume - VII, Cost Estimates:** This volume will present the contract package wise cost of each item of work as well as a summary of total cost.
- 8 **Volume - VIII, Bill of Quantities:** This volume shall contain the package-wise detailed Bill of Quantities for all items of works.
- 9 **Volume - IX, Drawing Volume:** All drawings forming part of this volume shall be 'good for tender' drawings. All plan and profile drawings will be prepared in scale of 1:250V and 1:2500H 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, tunnels and Structures.
 - f. Detailed Drawings for Improvement of At-Grade and Grade-Separated Intersections and Interchanges.

- g. *Drawings for Road Sign, Markings, Toll Plazas, and other Facilities.*
 - h. *Schematic Diagrams (linear chart) indicating but be not limited to be following:*
 - Widening scheme;
 - Locations of median openings, intersections, interchanges, underpasses, overpasses, bypasses;
 - Locations of service roads;
 - Location of traffic signals, traffic signs, road markings, safety features; and,
 - Locations of toll plaza, parking areas, weighing stations, bus bays, rest areas, if any.
 - i. *Drawings for toll plaza, Bus Bays, Parking areas, Rest areas, weighing stations etc. 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 JSCL 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, crash barriers delineators and rest areas, bus-bays, parking areas etc.*
 - j. *The typical cross-section drawings should indicate the scheme for future widening of the carriageway. The proposed cross-sections of road segment passing through urban areas should indicate the provisions for pedestrian movements and suitable measures for surface and sub-surface drainage and lighting, as required.*
- 10 **Volume - X, Civil Work Contract Agreement:** *A civil works contract agreement shall be submitted.*
- 11 **Volume-XI, Project Clearances** – *All the necessary(project related) clearances (such as from MOEF, Railways in respect of ROB/ RUBs, Irrigation Deptt. and any other concerned agencies) shall be obtained by the Consultant and submitted to JSCL so that project implementation can straight away proceed without any hold up.*

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

The Final package-wise DPR consisting of Main Report, Design Report, Drainage Design Report and Materials Report, incorporating all revisions deemed relevant following receipt of the comments from JSCL on the draft DPR shall be submitted as per the schedule given in Enclosure-III along with the Land Acquisition Report as mentioned under para 10.5.

11 Interaction with JSCL

- i. During entire period of services, the Consultant shall interact continuously with JSCL and provide any clarification as regards methods being followed and carryout modification as suggested by JSCL. A programme of various activities shall be provided to JSCL and prior intimation shall be given to JSCL regarding start of key activities such as boring, survey etc. so that inspections of JSCL officials could be arranged in time.
- ii. The JSCL officers and other Government officers may visit the site at any time,

individually or collectively to acquaint/ supervise the field investigation and survey works. JSCL may also appoint a **Proof Consultant to supervise the work of the DPR Consultant including inter-alia field investigation, survey work, Design work and preconstruction activities.**

- iii. 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 JSCL. 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 Delhi are foreseen during the currency of project preparation.
- iv. 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.

12 Team Composition & Qualification Requirements for the Key Experts

The following is the estimated minimum requirement of the key personnel/experts for the project. However, the Consultants can estimate and propose the requirement based on their experience on similar projects.

S.No	Key Personnel	Total Time Period (mm)
1	Team Leader Cum Senior Tunnel Engineer	8
2	Tunnel Design Engineer	6
3	Sr. Geologist	3
4	Senior E&M Expert	2
5	Senior Survey Engineer	2
6	Transport Planner	1
7	Environmental Specialist	3
8	Highway cum pavement Engineer	2
9	Quantity Surveyor	4
10	Financial expert	1
	Total	32

The educational and experience requirements of the experts is provided below:

S.No.	Description	Position
	Position	Team Leader cum Senior Tunnel Engineer
i)	Educational Qualification	
	Essential	Graduate in Civil Engineering/ tunnel engineering/ Mining Engineering/ Related field
	Desirable	Post Graduate in Civil Engineering/ tunnel engineering/ Mining Engineering / Related field
ii)	Essential Experience	
	a)Total Professional Experience	Min. 20 years

S.No.	Description	Position
	b) Experience in Tunnel Projects	15 (Fifteen) years in planning, project preparation and design of Tunnel (Road / Rail/ Metro) projects.
	c) Experience in similar capacity (Either as Team Leader or in Similar capacity)	He should have handled as Team Leader or similar in capacity at least two Tunnel (Road/Rail/Metro) projects of DPR preparation /IC/ Construction Supervision/ Feasibility cum Detailed Project Report of at least 2.0 km length each
iii)	Age Limit	70 years on the date of submission of proposal

	Position	Senior Tunnel Design Engineer
i)	Educational Qualification	
	Essential	Degree in Civil Engineering
	Desirable	Post Graduate in Structure /tunnel engineering/ Mining Engineering / Related field
ii)	Experience	
	a) Total Professional Experience	Min. 15 years
	b) Experience in Tunnel projects	10 (Ten) years in planning, project preparation and design of Tunnel (Road/Rail/ Metro) Projects
	c) Experience in similar capacity	He should have designed at least four Tunnels (Road/ Rail/ Metro) projects of 2.0 km or more length.
iii)	Age Limit	70 years on the date of submission of Proposal

	Position	Senior Geologist
i)	Educational Qualification	
	Essential	Post Graduate in Geology/ Related field
	Desirable	Phd in Geology/ Related field
ii)	Experience	
	a) Total Professional Experience	Min. 20 years
	b) Experience in Tunnel projects	He should have a minimum fifteen years of professional experience in project preparation/Feasibility/ DPR of Tunnel (Road/Rail/ Metro) projects
	c) Experience in similar capacity	He should have experience in similar capacity on Design/ Construction/ Supervision of at least two Tunnels (Road/Rail/ Metro) projects of 2.0 km or more length
iii)	Age Limit	70 years on the date of submission of Proposal

	Position	Senior E & M Expert
i)	Educational Qualification	

S.No.	Description	Position
	Essential	Graduate in Elect/Mechanical Engineering or related field
	Desirable	Post Graduate in electrical/Mechanical engineering/ Tunnel ventilation or related field
ii)	Experience	
	a) Total Professional Experience	Min. 15 years
	b) Experience in Tunnel projects	At least 5 years of professional experience in team of project preparation/Feasibility/DPR of Tunnel (Road/Rail/Metro) projects.
	c) Experience in similar capacity	He should have handled as Sr E&M expert on Design/Construction/Supervision of at least two Tunnel (Road/Rail/Metro) projects
iii)	Age Limit	70 years on the date of submission of Proposal

	Position	Senior Survey Engineer
i)	Educational Qualification	
	Essential	Graduate or equivalent in Civil Engineering or Diploma in Civil Engg or Diploma in Surveying
	Desirable	Masters in Survey Engineering/Surveying /Remote Sensing
ii)	Experience	
	a) Total Professional Experience	Min. 15 years
	b) Experience in Highwayl projects	Min. 5 years on similar projects in project preparation and construction & thorough understanding of modern computer based methods of surveying
	c) Experience in similar capacity	Survey Engineer for projects preparation of highway project (NH/SH/Expressways) involving 2/4/6- laning of minimum aggregate length of 150 kms.
iii)	Age Limit	65 years on the date of submission of Proposal

	Position	Transport Planner
i)	Educational Qualification	
	Essential	Post Graduate in Transport Planning
	Desirable	-
ii)	Experience	
	a) Total Professional Experience	Min. 15 years
	b) Experience in Highwayl projects	Minimum 10 years of experience in conducting, analysing traffic surveys for National / State highway projects and demand estimation.
	c) Experience in similar capacity	Transport Planner in at least two highway projects (2/4/6 laning)

S.No.	Description	Position
iii)	Age Limit	65 years on the date of submission of Proposal

	Position	Environmental Specialist
i)	Educational Qualification	
	Essential	Graduate in Civil Engineering / Environment Engineering / Masters in Environment science.
	Desirable	Post Graduate in Environment Engineering
ii)	Experience	
	a) Total Professional Experience	Min. 10 years
	b) Experience in Highway/ projects	Min 5 years in Environment impact assessment of highway projects (2/4/6 laning)
	c) Experience in similar capacity	Environmental Specialist in at least two highway projects (2/4/6 laning)
iii)	Age Limit	70 years on the date of submission of Proposal

	Position	Highway cum Pavement engineer
i)	Educational Qualification	
	Essential	Graduate in Civil Engineering
	Desirable	Masters in Highway Engineering/ Transport Engineering/planning
ii)	Experience	
	a) Total Professional Experience	Min. 15 years
	b) Experience in Highway projects	Min 10 years experience in pavement design and maintenance of highways
	c) Experience in similar capacity	Pavement design for major highway projects (2/4/6 lane NH/ SH/ Expressways) of minimum aggregate length of 150 km.
iii)	Age Limit	70 years on the date of submission of Proposal

	Position	Quantity Surveyor
i)	Educational Qualification	
	Essential	Graduate or equivalent in Civil Engineering /Certificate course from 'Institution of Quantity Surveying
	Desirable	-
ii)	Experience	
	a) Total Professional Experience	Min. 15 years
	b) Experience in Highway projects	Min. 5 years in Preparation of Bill of Quantities, Contract documents and documentation for major highway projects involving two/ four laning. Experience in Tunnel projects shall be preferred.

S.No.	Description	Position
	c) Experience in similar capacity	Quantity Surveyor / Documentation Expert in Design/ Construction/ Supervision of at least two Tunnels (Road/ Rail/ Metro) projects of 2.0 km or more length.
iii)	Age Limit	70 years on the date of submission of Proposal

	Position	Financial Expert
i)	Educational Qualification	
	Essential	CA or MBA Finance
	Desirable	-
ii)	Experience	
	a) Total Professional Experience	Min. 10 years
	b) Experience in Highway projects	Min. 5 years in preparation of Economic and Financial Analysis of highway projects on BOT basis.
	c) Experience in similar capacity	Financial Expert in min two NH projects
iii)	Age Limit	65 years on the date of submission of Proposal

13 Data and Software

- 1 The floppy diskettes/CD's containing all basic as well as the processed data from all field studies and investigations, report, appendices, annexure, documents and drawings shall be submitted to JSCL at the time of the submission of the Final Report. The data can be classified as follows:
 - i. **Engineering Investigations and Traffic Studies** : Road Inventory, Condition, Roughness, Test Pit (Pavement composition), Benkelman Beam Deflection, Material Investigation including test results for sub grade soils, Traffic Studies(traffic surveys), axle load surveys, Sub-soil Exploration, Drainage Inventory, Inventory data for bridge and culverts indicating rehabilitation, new construction requirement etc. in MS EXCEL or any other format which could be imported to widely used utility packages.
 - ii. **Topographic Surveys and Drawings**: All topographic data would be supplied in (x, y, z) format along with complete reference so that the data could be imported into any standard highway design software. The drawing files would be submitted in dxf or dwg format.
 - iii. **Rate Analysis**: The Consultant shall submit the rate analysis for various works items including the data developed on computer in this relation so that it could be used by the Authority later for the purpose of updating the cost of the project.

iv. ***Economic and Financial Analysis.***

- 2 **Software:** The Consultant shall also hand-over to JSCL floppies/CD's containing any general software including the financial model which has been specifically developed for the project.
- 3 The floppy diskettes/CD's should be properly indexed and a catalogue giving contents of all floppies/CD's and print-outs of the contents (data from field studies topographic data and drawings) should be handed over to JSCL at the time of submission of the Final Report.

SUPPLEMENT I

ADDITIONAL POINTS TO BE CONSIDERED FOR HILL ROADS IN ADDITION TO POINTS COVERED IN MAIN TOR

S.No.	Clause No. of TOR	<i>Additional points</i>
1	2.2	a) Provisions of tunnels if required.
2	2.3	a) Design of tunnels, if required b) Design of protective works, slope stabilization measures, erosion control measures, land slide control/protection measures snow drift control/snow clearance measures, avalanche protection measures, if required
3	3	Feasibility study and preparation of detailed project report for hill roads shall be done in accordance with best international practices and wherever practicable/feasible steep gradients and hair pin bends may be avoided by realignments by provision of structures and provision of tunnels if required
4	4.1	a) Inventory and condition survey for tunnels, if required. b) Identification of faults in rock strata and impact of faults in design of tunnels, if required c) Detailed design of road considering and incorporating specific aspects related to hill region like terrain, topographic conditions, extreme weather conditions, altitude effects etc. d) Design of protective works, slope stabilization measures, erosion control measures, land slide control/protection measures, snow drift control/snow clearance measures, avalanche protection measures, if required e) Design of scenic overlooks/watering points etc.
5	4.5 (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)/Bureau of Indian Standards (BIS) for hill roads. For aspects not covered by IRC and BIS, international standard practices, such as, British and American Standards may be adopted.
6	4.7	Review of data and documents pertaining to a) Terrain and soil condition b) Condition of tunnels, if required. c) Sub-surface and geo-technical data for existing tunnels, if required. d) Drawing and details of existing tunnels, if required. e) Existing protective works, erosion control and land slide control/protection works, slope stabilization measures, snow drift control measures, avalanche protection measures f) Existing land slide and snow clearance facilities g) Geological details of rock strata in the area in case of tunnels
7	4.11(1)	The Consultant should make an in depth study of available geological and meteorological maps of the area.
8	4.11 (2)	The primary tasks to be accomplished during the reconnaissance survey shall also include:

		<p>a) details of terrain (steep or mountainous), cliffs and gorges, general elevation of the road including maximum heights negotiated by main ascents and descents, total number of ascents and descents, hair pin bends, vegetation etc.</p> <p>b) Climatic conditions i.e. temperature, rain fall data, snow fall data, fog conditions, unusual weather conditions etc.</p> <p>c) Realignment requirements including provision of tunnels, if required.</p> <p>d) Inventory of tunnels and geologically sensitive areas like slip prone areas, areas subject to landslides, rock fall, snow drifts, erosion, avalanche activity etc.</p>
9	4.11.2.1 (ii)	Cross sections shall be taken at every 25 m. in case of hill roads and at points of appreciable changes in soil conditions. While taking cross sections, soil conditions shall also be recorded.
10	4.11.3.1(1)	<p>The inventory data shall also include:</p> <p>a) General elevation of road indicating maximum & minimum heights negotiated by main ascents & descents and total no. of ascents & descents.</p> <p>b) Details of road gradients, lengths of gentle & steep slopes, lengths & location of stretches in unstable areas, areas with cliffs, areas with loose rocks, land slide prone areas, snow drift prone areas, no. & location of hairpin bends etc.</p> <p>c) Details of tunnels</p> <p>d) Details & types of protective structures, erosion & land slide control/protection measures, snow drift control measures, avalanche protection/control measures etc.</p>
11	4.11.3.2 (2)	<p>Pavement:</p> <p>a) Location of crust failures along with their causes</p> <p>b) Conditions of camber/cross falls /super elevations etc., whether affected by subsidence</p> <p>Embankment:</p> <p>Extent of slope erosion on hill and valley side</p>
12.		<p>Condition Surveys & Investigation for Slope Stabilization, Erosion Control, Landslide Correction/Protection & Avalanche Protection Measures:</p> <p>a) Inventory & Condition Surveys of Existing Protective/Control Measures: The consultant shall make an inventory of all the structures related to Slope Stabilization, Erosion Control, Landslide Control/protection, Avalanche Protection etc. This shall include details of effectiveness of control measures already done and condition of protective/control structures.</p> <p>b) Landslide Investigation This shall be carried out to identify landslide prone areas, to suggest preventive measures or alternate routes that are less susceptible to landslide hazard. Further in existing slide areas this shall help to identify factors responsible for instability and to determine appropriate control measures needed to prevent or minimize recurring of instability problems. Initial preliminary studies shall be carried out using available contour maps , topographical maps, geological/geo-morphological maps, aerial photographs etc. for general understanding of existing slide area and to identify potential slide areas. This shall be followed by further</p>

		investigations like geological/ geotechnical/hydrological investigation to determine specific site conditions prevailing in the slide area as per relevant IRC specifications/publications, MORT&H circulars and relevant recommendations of the international standards for hill roads. The result of the investigations shall provide basis for engineering analysis and the design of protection/remedial measures.
13	4.11.4.4	a) For tunnels if required, geotechnical and subsurface investigation shall be done as per IRC:SP:91. b) Geotechnical and subsurface investigation and testing for tunnels shall be carried out through the geotechnical Consultants who have the experience of geotechnical and subsurface investigation in similar project.
14	4.12.1 (1)	The Consultant shall also carry out detailed designs and prepare working designs for the following: a) cross sections at every 25 m intervals b) Slope stabilization and erosion control measures c) Design of protection/control structures in areas subject to subsidence, landslides, rock fall, rock slide, snow drifts, icing, scour, avalanche activity etc. d) Design of protective structures in slip prone and unstable areas e) Design of scenic overlooks, watering points etc. f) Safety features specific to hill roads
15.	4.12.2 (1)	The Consultant shall evolve Design Standards and material specifications
	4.12.2 (2)	for the Study primarily based on IRC publications, MORT &H Circulars and relevant recommendations of the international standards for hill roads 4.12.2 (2) for approval by NHAI. 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 , tunnels if required, traffic safety and materials.
16	4.12.3	Wherever practicable/feasible hairpin bends and steep gradients shall be avoided by realignments, provision of structures or any other suitable provisions
17	4.12.4	While designing pavement for hill roads specific aspects relevant to hill regions like terrain & topographic conditions, weather conditions, altitude effects etc. shall be duly considered and suitably incorporated in design so that pavement is able to perform well for the design traffic and service life. Effects of factors like heavy rainfall, frost action, intensive snow and avalanche activity, thermal stresses due to temperature difference in day and night, damage by tracked vehicles during snow clearance operations etc. must also be considered along with traffic intensity, its growth, axle loads and design life.
18	4.12.5(3)	The design of embankments should include the requirements for protection works and traffic safety features including features specific to hill roads
19.		Design and Drawing of Tunnels: The Consultant shall prepare design and drawings for tunnels, if required as per the results of feasibility study, as per the relevant specifications of IRC:SP:91/MORT&H and other international specifications
20	4.12.7	a) Topography of hills generates numerous water courses and this coupled with continuous gradients of roads in hills and high intensity of

		<p>rainfall calls for effective drainage of roads. The drainage system shall be designed to ensure that the water flowing towards the road surface may be diverted and guided to follow a definite path by suitable provision of road side drains, catch water drains, interceptors etc. and flow on valley side is controlled so that stability is not affected.</p> <p>b) Further, adequate provision shall be made for sub-surface/sub grade drainage to take care of seepage through the adjacent hill face of the road & underground water flows .</p>
21	4.12.8	<p>The Consultant shall design suitable traffic safety features and road furniture including traffic signals, signs, markings, overhead sign boards, crash barriers ,delineators etc. including any feature specific to hill roads. The locations of these features shall be given in the reports and also shown in the drawings.</p>
22	4.12.3 (1)	<p>The Consultant shall make suitable designs and layout for miscellaneous works including rest areas, bus bays, vehicle parking areas, telecommunication facilities, scenic overlooks, watering points etc. wherever appropriate.</p>
23	10.6(1)	<p>Volume II: Design Report :</p> <p>a) Inventory of protection measures and other structures b) Inventory of tunnels, if required. c) Proposed preliminary designs for tunnels, if required.</p> <p>Volume III: Drawings</p> <p>a) Drawings for protection/control measures and other structures b) Drawings for tunnels, if required.</p>
24	10.7 (3)	<p>Volume II: Design Report (Part II) Part II of Design Report shall also deal with design of tunnels, if required and design of other protection/control structures.</p> <p>Volume IX: Drawing Volume This shan also include:</p> <p>a) Detailed working drawings for tunnels, if required. b) Detailed working drawings for protection/control structures</p>

Supplement II

S.No.	Clause No. of TOR	<i>Additional points</i>
1	4.1	For stand alone bridge projects the scope of work shall include detailed design of approach road extending at least up to 2 km on either side of the bridge
I.	4.II.4.2(6)	<p>Model Studies for Bridges</p> <p>1. Objective Physical! Mathematical Model study for detailed Hydraulic / Hydrologic investigations regarding the proposed bridge for hydraulic design of the bridge and assessment and hydraulic design of required river training works.</p> <p>2. Methodology Physical/Mathematical Model study shall be carried out at a reputed/recognized institution. The consultant will be responsible for identifying the institution, supplying Information /Documents /Data required for modal studies as indicated in para 4 below and coordinating the model study with the institution concerned</p> <p>3. Scope of Work 3.1 Physical Model study Physical modeling with appropriate model scale for Hydraulic and Hydrologic Investigations to : i) Finalize span arrangement causing uniformity in flow distribution, and work out the alignment and orientation of river training works and bridge axis. ii) Provide information on estimated/observed maximum depth of scour. iii) Provide information on required river training works for proposed bridge iv) Provide hydraulic design for the bridge and the required river training works. v) Quantify the general direction of river course through bridge, afflux, extent and magnitude of flood, effect of backwater, if any, aggradation/degradation of bed, evidence of scour etc. shall be used to augment the available hydrological data. The presence of flood control/irrigation structures, if affecting the hydraulic characteristics like causing obliquity, concentration of flow, scour, silting of bed, change in flow levels, bed levels etc. shall be studied and considered in Hydraulic design of proposed bridge. The details of any planned work in the immediate future that may affect the river hydraulics shall be studied and considered</p> <p>3.2 Mathematical Model study Mathematical modeling for detailed Hydraulic / Hydrologic investigations regarding the proposed new bridge to : i) Finalize the site/location of the proposed new bridge based on mathematical modeling. ii) Provide information on estimated! observed maximum depth of</p>

		<p>scour..</p> <p>iii) Provide information on required river training works for proposed bridge</p> <p>iv) Provide hydraulic design for the bridge and the required river training works.</p> <p>v) Quantify the general direction of river course through bridge, afflux, extent and magnitude of flood, effect of backwater, if any, aggradation/degradation of bed, evidence of scour etc. shall be used to augment the available hydrological data. The presence of flood control/irrigation structures, if affecting the hydraulic characteristics like causing obliquity, concentration of flow, scour, silting of bed, change in flow levels, bed levels etc. shall be studied and considered in Hydraulic design of proposed bridge. The details of any planned work in the immediate future that may affect the river hydraulics shall be studied and considered.</p> <p>4. Information / Documents / Data required for Physical /Mathematical Model study</p> <p>i. Plan layouts showing the locations of the proposed bridge as well as the existing bridges / barrages etc., in the vicinity of the proposed bridge with the chainages with respect to a standard reference marked on it.</p> <p>ii. High flood discharges and corresponding flood levels at the locations of the existing bridges in the vicinity of the proposed bridge.</p> <p>iii. General arrangement drawing (GAD) of the existing bridges showing number of spans, pier and well dimensions, founding levels, maximum scour level, the design discharge and the HFL, guide bund details. On this, the plan form of the river course with the bridge alignment may also be shown as far as possible.</p> <p>iv. General arrangement drawing (GAD) of the proposed new bridge showing number of spans, pier and foundation dimensions. On this, the plan form of the river course with the bridge alignment may also be shown as far as possible.</p> <p>v. River cross sections at 500m longitudinal spacing (maximum) up to a distance of 2 times the bridge total length on the upstream side and up to a distance equal to the bridge total length on the downstream with right bank and left bank clearly marked on it. At least one cross section to be provided at the location of the proposed bridge. At each cross section, the bed levels to be taken at a maximum lateral distance of 8 m in flow section and at 25 m in nonflow section respectively. The abrupt variations in the bed levels to be captured by taking measurements at closer locations both in longitudinal as well as lateral directions.</p> <p>vi. The cross sections, as far as possible, from high bank to high bank.</p> <p>vii. The longitudinal profile of the river along the length of the proposed alignment.</p> <p>viii. Size distribution of the river bed material and the bore log data at different locations at the site of the proposed bridge.</p> <p>ix. The series of annual peak flood of the river for at least 15 years period.</p>
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SUPPLEMENT III

ADDITIONAL REQUIREMENT FOR SAFETY AUDIT

The use of checklists is highly recommended as they provide a useful "aide memo ire" for The audit team to check that no important safety aspects are being overlooked. They also give to The project manager and the design engineer a sense of understanding of the place of safety audit In the design process. The following lists have been drawn up based on the experience of undertaking systematic safety audit procedures overseas. This experience indicates that extensive lists of technical details has encouraged their use as "tick" sheets without sufficient thought being given to the processes behind the actions. Accordingly, the checklists provide guidelines on the principal issues that need to be examined during the course of the safety audits.

Stage F-During Feasibility Study

I. The audit team should review the proposed design from a road safety perspective and Check the following aspects

CONTENTS	ITEMS
Aspects to be checked	A. Safety and operational implications of proposed alignment and junction strategy with particular references to expected road users and vehicle types likely to use the road. B. Width options considered for various sections. C. Departures from standards and action taken. D. Provision of pedestrians, cyclists and intermediate transport E. Safety implications of the scheme beyond its physical limits i.e. how the scheme fits into its environs and road hierarchy
A1: General	~ Departures from standards ~ Cross-sectional variation ~ Drainage ~ Climatic conditions ~ Landscaping ~ Services apparatus ~ Lay-byes ~ Footpath ~ Pedestrian crossings ~ Access (minimize number" of private accesses) ~ Emergency vehicles ~ Public Transport ~ Future widening ~ Staging of contracts ~ Adjacent development
A2 : Local Alignment	~ Visibility ~ New/Existing road interface ~ Safety Aids on steep hills
A3 : Junctions	~ Minimise potential conflicts ~ Layout ~ Visibility
A4 Non-Motorised~	~ Adjacent land

road users Provision	~ Pedestrians ~ Cyclists ~ Non-motorised vehicles
A5 : Signs and Lighting	~ Lighting ~ Signs/Markings
A6 Construction and ~ Operation	~ Buildability ~ Operational ~ Network Management

Stage 1- Completion of Preliminary Design

1. The audit team should review the proposed check the following aspects design from a road safety perspective and check the following aspects	
CONTENTS	ITEMS
Aspects to be checked	A. Safety and operational implications of proposed alignment and junction strategy with particular references to expected road users and vehicle types likely to use the road. B. Width options considered for various sections. C. Departures from standards and action taken. D. Provision of pedestrians, cyclists and intermediate transport E. Safety implications of the scheme beyond its physical limits i.e. how the scheme fits into its environs and road hierarchy
B1: General	~ Departures from standards ~ Cross-sectional variation ~ Drainage ~ Climatic conditions ~ Landscaping ~ Services apparatus ~ Lay-byes ~ Footpaths ~ Pedestrian crossings ~ Access (minimize number of private accesses) ~ Emergency vehicles ~ Public Transport ~ Future widening ~ Staging of contracts ~ Adjacent development
B2 : Local Alignment	~ Visibility ~ New/Existing road interface ~ Safety Aids on steep hills
B3 : Junctions	~ Minimise potential conflicts ~ Layout ~ Visibility
B4 Non-Motorised road users Provision	~ Adjacent land ~ Pedestrians ~ Cyclists ~ Non-motorised vehicles
B5 : Signs and Lighting	~ Lighting ~ Signs/Markings
B6 Construction and Operation	~ Buildability ~ Operational

~ Network Management

Stage 2 - Completion of Detailed Design

1. The audit team should satisfy itself that all issues raised at Stage 1 have been resolved. Items may require further consideration where significant design changes have occurred.

2. If a scheme has not been subject to a stage 1 audit, the

CONTENTS	ITEMS
Aspects to be checked	A. Any design changes since Stage I. B. The detailed design from a road safety viewpoint, including the road safety implications of future maintenance (speed limits; road signs and markings; visibility; maintenance of street lighting and central reserves).
C1 : General	~ Departures from standards ~ Drainage ~ Climatic conditions ~ Landscaping ~ Services apparatus ~ Lay-byes ~ Access ~ Skid-resistance ~ Agriculture ~ Safety Fences ~ Adjacent development
C2 : Local Alignment	~ Visibility ~ New/Existing road interface
C3 : Junctions	~ Layout ~ Visibility ~ Signing ~ Lighting ~ Road Marking ~ T,X, Y-junctions ~ All roundabouts ~ Traffic signals
C4 Non-Motorised road Users provision	~ Adjacent land ~ Pedestrians ~ Cyclists ~ Non-motorised vehicles
C5 : Signs and Lighting	~ Advanced direction signs ~ Local traffic signs ~ Variable message signs ~ Other traffic signs ~ Lighting
C6 Construction and Operation	~ Buildability ~ Operational ~ Network Management

Section IV: Proposal loading Forms

The consultants are advised to note the following before they decide on submitting the proposal:

As a minimum the Consultant must comply the following four points, without which the proposal submitted by the Consultants will be summarily rejected and not considered for further processing.

- Past Experience of the Sole Entity/ Lead Firm in the field of Consultancy : Minimum of Five years (Attach Document of Company's incorporation)
- Average Annual Turn Over for last 3 years (to be substantiated by attaching Audited Balance Sheet) : As minimum shall not be less than the Estimated Cost (Budgetary cost of the consultancy).
- Net worth for all the consultants (including partner of JV/ Consortium/ Association) should be positive (to be substantiated by the Auditor's certificate to be attached).
- Pending Litigation for the Sole Entity/ Lead Firm: Total amount of Pending Litigation shall not be more than 50% of the Estimated Cost (Budgetary cost of the consultancy).

{Notes to Consultant shown in brackets { } throughout Section III provide guidance to the Consultant to prepare the Technical Proposal and Financial Proposal; they should not appear on the Proposals to be submitted.}

Checklist of Required Technical Proposal Forms

Required for FTP or STP (√)		FORM	DESCRIPTION	Page Limit
FTP	STP			
√	√	TECH-1	Technical Proposal Submission Form.	
“√” If applicable		TECH-1 Attachment	If the Proposal is submitted by a joint venture, attach a letter of intent or a copy of an existing agreement.	
√		TECH-2	Consultant's Organization and Experience.	
√		TECH-2A	A. Consultant's Organization	
√		TECH-2B	B. Consultant's Experience	
√		TECH-3	Comments or Suggestions on the Terms of Reference and on Counterpart Staff and Facilities to be provided by the Client.	
√		TECH-3A	A. On the Terms of Reference	
√		TECH-3B	B. On the Counterpart Staff and Facilities	
√	√	TECH-4	Description of the Approach, Methodology, and Work Plan for Performing the Assignment	
√	√	TECH-5	Work Schedule and Planning for Deliverables	
√	√	TECH-6	Team Key Experts Inputs, and Attached Composition, Curriculum Vitae (CV)	
√	√	TECH-7A or 7B	Form of Proposal Security/ Proposal Securing Declaration	
√	√	TECH-8	Declaration by the Consultant u/s 7 & 11 of the Act	
√	√	TECH-9	Power of Attorney – Sample format is given but in the case of a Joint Venture, a power of attorney for the authorized representative of each JV member, and a power of attorney for the representative of the lead member to represent all JV members are required.	
√	√	TECH-10	Format for queries for Pre-Proposal Conference/ seeking clarifications on Proposal loading Document	

All pages of the original Technical and Financial Proposal shall be signed by the Consultant or the same authorized representative of the Consultant who signs the Proposal.

Form: TECH-1

TECHNICAL PROPOSAL SUBMISSION FORM

{Location, Date}

To: *[Name and address of Client]*

Dear Sirs:

We, the undersigned, offer to provide the consulting services for *[Insert title of assignment]* in accordance with your Request for Proposals dated *[Insert Date]* and our Proposal. *[Select appropriate wording depending on the selection method stated in the RFP: "We are hereby submitting our Proposal, which includes this Technical Proposal and a Financial Proposal separately"*

{If the Consultant is a joint venture/ consortium/association, insert the following: "We are submitting our Proposal a joint venture/ consortium/association with _____{Insert a list with full name and the legal address of each member, and indicate the lead member}. We have attached a copy {insert: "of our letter of intent to form a joint venture / consortium/association" or, if a JV/ consortium/association is already formed, "of the JV / consortium/association agreement"} signed by every participating member, which details the likely legal structure of and the confirmation of joint and severable liability of the members of the said joint venture / consortium/association".

{OR}

If the Consultant's Proposal includes Sub-consultants, insert the following: "We are submitting our Proposal with the following firms as Sub-consultants: {Insert a list with full name and address of each Sub-consultant."}

We hereby declare that:

(a) All the information and statements made in this Proposal are true and we accept that any misinterpretation or misrepresentation contained in this Proposal may lead to our disqualification by the Client and action may be taken against us under the provisions of the Act and the Rules;

(b) Our Proposal shall be valid and remain binding upon us for the period of

time specified in the Proposal Data Sheet, Sub-Clause 3.6.1;

- (c) We meet the eligibility requirements as stated in ITC Sub-Clause 3.2 and minimum qualification criteria as specified in Proposal Data Sheet, Sub-Clause 7.2.1;
- (d) We, including any sub-consultants for any part of the Services, declare that we do not have any conflict of interest in accordance with ITC Sub-Clause 3.1 and we have complied with and shall continue to comply with the Code of Integrity contained in the Act, the Rules and ITC Sub-Clause 3.1.5.1 during execution of the Contract till completion of all our obligations under the Contract;
- (e) Except as stated in the Proposal Data Sheet, Sub-Clause 3.6.1, we undertake to negotiate a Contract on the basis of the proposed Key Experts. We accept that the substitution of Key Experts for reasons other than those stated in ITC Sub-Clause 3.6.1 and ITC Sub-Clause 8.2 may lead to the termination of Contract negotiations.
- (f) Our Proposal is binding upon us and subject to any modifications resulting from the Contract negotiations.
- (g) We agree to permit Government of Rajasthan or the Procuring Entity or their representatives to inspect our accounts and records and other documents relating to the proposal submission and to have them audited by auditors appointed by them;
- (h) Other comments, if any:

We undertake, if our Proposal is accepted and the Contract is signed, to initiate the Services related to the assignment no later than the date indicated in Sub-Clause 9.1.3 of the Proposal Data Sheet.

We understand that the Client is not bound to accept any Proposal that

the Client receives. We remain,

Yours sincerely,

Authorized Signature {In full and initials}: _____ Name and Title of Signatory: _____

Name of Consultant (firm's/ company's name or JV/ Consortium/Association's name): _____

In the capacity of: _____

Complete Address: _____

Contact information (phone and e-mail): _____

{For a joint venture, either all members shall sign or only the lead member, in which case the power of attorney to sign on behalf of all members shall be attached}

Form TECH-2 (FOR FULL TECHNICAL PROPOSAL ONLY)

CONSULTANT'S ORGANIZATION AND EXPERIENCE

Form TECH-2: a brief description of the Consultant's organization and an outline of the recent experience of the Consultant that is most relevant to the assignment. In the case of a joint venture, information on similar assignments shall be provided for each partner. For each assignment, the outline should indicate the names of the Consultant's Key Experts and Sub-consultants who participated, the duration of the assignment, the contract amount (total and, if it was done in a form of a joint venture or a sub-consultancy, the amount paid to the Consultant), and the Consultant's role/involvement.

A - Consultant's Organization

1. Provide here a brief description of the background and organization of your firm/company, and, in case of a joint venture / consortium/association, of each member for this assignment.
2. Enclose proof of possessing minimum eligibility and qualifications as per the criteria, if any specified in the Proposal Data Sheet, e.g. regarding number of years of experience, financial turnover, amount involved in litigation against the firm etc.
2. Include organizational chart, a list of Board of Directors, and beneficial ownership

B - Consultant's Experience

1. List only previous similar assignments successfully completed in the last five years.
2. List only those assignments for which the Consultant was legally contracted by the Client as a company or was one of the joint venture partners. Assignments completed by the Consultant's individual experts working privately or through other consulting firms cannot be claimed as the relevant experience of the Consultant, or that of the Consultant's partners or sub-consultants, but can be claimed by the Experts themselves in their CVs. The Consultant should be prepared to substantiate the claimed experience by presenting copies of relevant documents and references if so requested by the Client.

Form TECH-4 (FOR FULL TECHNICAL PROPOSAL ONLY)

DESCRIPTION OF APPROACH, METHODOLOGY, AND WORK PLAN IN RESPONDING TO THE TERMS OF REFERENCE

Form TECH-4: a description of the approach, methodology and work plan for performing the assignment, including a detailed description of the proposed methodology and staffing for training, if the Terms of Reference specify training as a specific component of the assignment.

{Suggested structure of your Technical Proposal (in FTP format):

- a) Technical Approach and Methodology
- b) Work Plan
- c) Organization and Staffing}

a) **Technical Approach and Methodology.**{Please explain your understanding of the objectives of the assignment as outlined in the Terms of Reference (TORs), the technical approach, and the methodology you would adopt for implementing the tasks to deliver the expected output(s), and the degree of detail of such output. Please do not repeat/ copy the TOR here.}

b) **Work Plan.**{Please outline the plan for the implementation of the main activities/ tasks of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Client), and tentative delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing your understanding of the TOR and ability to translate them into a feasible working plan. A list of the final documents (including reports) to be delivered as final output(s) should be included here. The work plan should be consistent with the Work Schedule Form.}

c) **Organization and Staffing.**{Please describe the structure and composition of your team, including the list of the Key Experts, Non-Key Experts and relevant technical and administrative support staff.}

Form TECH-5 (FOR FTP AND STP)

WORK SCHEDULE AND PLANNING FOR DELIVERABLES

N°	Deliverables ¹ (D-..)	Months												
		1	2	3	4	5	6	7	8	9	n	TOTAL	
D-1	{e.g., Deliverable #1: Report A													
	1) data collection													
	2) drafting													
	3) inception report													
	4) incorporating comments													
	5)													
	6) delivery of final report to Client}													
D-2	{e.g., Deliverable #2:.....}													
n														

- 1 List the deliverables with the breakdown for activities required to produce them and other benchmarks such as the Client's approvals. For phased assignments, indicate the activities, delivery of reports, and benchmarks separately for each phase.
- 2 Duration of activities shall be indicated in a form of a bar chart.
3. Include a legend, if necessary, to help read the chart.

Form TECH-6 (FOR FTP AND STP)

TEAM COMPOSITION, ASSIGNMENT, AND KEY EXPERTS' INPUTS

N°	Name	Expert's input (in person/month) per each Deliverable (listed in TECH-5)										Total time-input (in Months)		
		Position		D-1	D-2	D-3	D-...				Home	Field	Total
KEY EXPERTS														
K-1	{e.g., Mr. A}	[Team Leader]	[Home]	[2 month]	[1.0]	[1.0]								
		[Field]	[0.5 m]	[2.5]	[0]									
K-2														
K-3														
n														
											Subtotal			
NON-KEY EXPERTS														
N-1			[Home]											
			[Field]											
N-2														
n														
											Subtotal			
											Total			

- 1 For Key Experts, the input should be indicated individually for the same positions as required under the Proposal Data Sheet ITC 7.2.1
- 2 Months are counted from the start of the assignment/mobilization. One (1) month equals twenty two (22) working (billable) days. One working (billable) day shall be not less than eight (8) working (billable) hours.
- 3 "Home" means work in the office in the expert's country of residence. "Field" work means work carried out in the Client's country or any other country outside the expert's country of residence.

 Full time input

 Part time input

**FORM TECH-6
(CONTINUED)**

CURRICULUM VITAE (CV)

(please affix a recent passport size coloured photograph)

Position Title and No.	{e.g., K-1, TEAM LEADER}
Name of Expert:	{Insert full name}
Date of Birth:	{day/month/year}
Country of Citizenship/ Residence	

Education: {List college/ university or other specialized education, giving names of educational institutions, dates attended, degree(s)/ diploma(s) obtained}

Employment record relevant to the assignment: {Starting with present position, list in reverse order. Please provide dates, name of employing organization, titles of positions held, types of activities performed and location of the assignment, and contact information of previous clients and employing organization(s) who can be contacted for references. Past employment that is not relevant to the assignment does not need to be included.}

Period	Employing organization and your title/position. Contact in for for References	Country	Summary of activities performed relevant to the Assignment
[e.g., May 2013-present]	[e.g., Ministry/ Department of, advisor/consultant to..... For references: Tel...../e-mail.....; Mr....., Secretary/ Jt. Secretary/ Dy. Secretary]		

FORM TECH-7A

FORM OF PROPOSAL SECURITY

[insert Bank's Name, and Address of Issuing Branch or Office] Beneficiary: [insert Name and Address of Procuring Entity] Date: [insert date]

PROPOSAL GUARANTEE No.: *[insert number]*

We have been informed that ***[insert name of the Consultant/ Consultants]*** (hereinafter called "the Consultant/ Consultants") has submitted to you its Proposal/ Proposal dated ***[insert date]*** (hereinafter called "the Proposal/ Proposal") for the execution of ***[insert name of contract]*** under Request for Proposals/ Notice Inviting Proposals No. ***[insert RFP/ NIB number]*** ("the RFP/NIB").

Furthermore, we understand that, according to your conditions, Proposals/ Proposals must be supported by a proposal guarantee.

At the request of the Consultant/ Consultants, we **[insert name of Bank]** hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ----- **[insert amount in figures][insert amount in words]** upon receipt by us of your first demand in writing accompanied by a written statement stating that the Consultant/ Consultants is in breach of its obligation(s) under the Proposal/ Proposal conditions, because the Consultant/ Consultants:

- (a) has withdrawn or modified its Proposal after deadline for submission of proposals/ proposals, during the period of proposal/ proposal validity specified by you in the Proposal Data Sheet (hereinafter "the BDS");or
- (b) having been notified during the period of proposal/ proposal validity specified in the BDS, about the acceptance of its Proposal/ Proposal by you,
 - (i) failed or refused to execute the Contract Agreement within the time period specified in the BDS,or
 - (ii) failed or refused to furnish the performance security, in accordance with the Instructions to Consultants (hereinafter "the ITB/ ITC") within the time period specified in the BDS, or
- (c) has not accepted the correction of arithmetical errors in accordance with the ITB/ ITC; or
- (d) has breached a provision of the Code of Integrity specified in the RTPP Act, RTPP Rules and the ITB/ITC.

This guarantee will expire: (a) if the Consultant/ Consultants is the successful Consultant/ Consultants, upon our receipt of copies of the contract signed by the Consultant/ Consultants and the performance security issued to you upon the instruction of the Consultant/ Consultants; and (b) if the Consultant/ Consultants is not the successful Consultants, upon the earlier of (i) our receipt of a copy of your notification to the Consultant/ Consultants of the name of the successful Consultant/ Consultants; or (ii) thirty days after the expiration of the validity of the Consultant/ Consultants's Proposal/ Proposal.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

Signed: _____

[insert signature of person whose name and capacity are shown]

Name: _____

[insert complete name of person signing the Proposal Security]

In the capacity of: _____

[insert legal capacity of person signing the Proposal Security]

Duly authorized to sign the Proposal Security for and on behalf of _____

[insert name of the Bank]

Dated on day of _____,

[insert date of signing]

Bank's Seal _____

[affix seal of the Bank]

[Note: In case of a Joint Venture/ / Consortium/Association, the Proposal-Security must be in the name of all partners to the Joint Venture Consortium/Association that submits the proposal.]

FORM TECH-7B
FORM OF PROPOSAL SECURING DECLARATION

Date: *[insert date (as day, month and year)]*

Proposal No.: *[insert number of proposal loading process]*

To: *[insert complete name and address of Procuring Entity]*

We, the undersigned, declare that:

We understand that, according to your conditions, Proposals/ Proposals must be supported by a Proposal- Securing Declaration.

We accept that we will automatically be suspended from being eligible for Proposal Loading in any contract with you, the Procuring Entity, for the period of time of *[insert number of months or years, as required by the Procuring Entity]* starting on *[insert date]*, if we are in breach of our obligation(s) under the proposal conditions, more specifically, if we:

- (a) withdraw or modify our Proposal/ Proposal after deadline for submission of proposals, during the period of proposal/ proposal validity specified in the Proposal Data Sheet (hereinafter “the BDS”);or
- (b) having been notified during the period of proposal/ proposal validity specified in the BDS, about the acceptance of our Proposal/Proposal by you,
 - (i) fail or refuse to execute the Contract Agreement within the time period specified in the BDS,
 - (ii) fail or refuse to furnish the performance security, in accordance with the Instructions to Consultants/ Consultants (hereinafter “the ITB/ ITC”) within the time period specified in the BDS,
- (c) not accept the correction of arithmetical errors in accordance with the ITB/ ITC; or
- (d) breach a provision of the Code of Integrity specified in the RTPP Act, RTPP Rules and the ITB/ITC.

We understand this Proposal-Securing Declaration shall expire if we are not the successful Consultant/ Consultants, upon the earlier of (i) our receipt of your notification to us of the name of the successful Consultant/ Consultants; or (ii) thirty days after the expiration of our Proposal/ Proposal.

Signed: _____

[insert signature of person whose name and capacity are shown]

Name: _____

_____ *[insert complete name of person signing the Proposal-Securing Declaration]* In the capacity of:

_____ *[insert legal capacity of person signing the Proposal-Securing Declaration]*

Duly authorized to sign the proposal for and on behalf of: _____

[insert complete name and address of the Consultants]

Dated on day of _____, _____ *[insert date of signing]*

Corporate Seal _____ *[affix corporate seal of the consultants]*

[Note: In case of a Joint Venture /Consortium/Association, the Proposal-Securing Declaration must be in the name of all partners to the Joint Venture/ Consortium/Association that submits the proposal.]

FORM TECH-8

DECLARATION BY THE CONSULTANT/ CONSULTANTS U/S 7 & 11 OF THE ACT

In relation to our Proposal/ Proposal submitted to [*enter designation and address of the procuring entity*] for procurement of [*insert name of the Services*] in response to their Request for Proposals/ Notice Inviting Proposals No..... Dated we hereby declare under Section 7 and 11 of the Rajasthan Transparency in Public Procurement Act, 2012, that:

1.We are eligible and possess the necessary professional, technical, financial and managerial resources and competence required by the RFP/ Proposal loading Document issued by the Procuring Entity;

2.We have fulfilled our obligation to pay such of the taxes payable to the Central Government or the State Government or any local authority, as specified in the RFP/ Proposal loading Document;

3.We are not insolvent, in receivership, bankrupt or being wound up, not have our affairs administered by a court or a judicial officer, not have our business activities suspended and are not the subject of legal proceedings for any of the foregoing reasons;

4.We do not have, and our directors and officers not have, been convicted of any criminal offence related to our professional conduct or the making of false statements or misrepresentations as to our qualifications to enter into a procurement contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;

5.We do not have a conflict of interest as specified in the Rajasthan Transparency in Public Procurement Act, the Rajasthan Transparency in Public Procurement Rules and this RFP/ Proposal loading Document, which materially affects fair competition;

6.We have complied and shall continue to comply with the Code of Integrity as specified in the Rajasthan Transparency in Public Procurement Act, the Rajasthan Transparency in Public Procurement Rules and this RFP/ Proposal loading Document, till completion of all our obligations under the Contract.

Date: Signature of Consultant/Consultants

Place: Name:

Designation:Address:

FORM TECH-9 POWER OF ATTORNEY

(On Stamp paper of appropriate value)

Know all persons by these presents, We..... *[name of the Consultant/ Consultants and address of its registered office]* do hereby constitute, appoint and authorize Mr. / Ms. *[name and residential address]* who is presently employed with us and holding the position of as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our Proposal/ Proposal for *[name of the project/ assignment]*, including signing and submission of all documents and providing information/ responses to*[designation of procuring entity]* in all matters in connection with our Proposal/ Proposal for the said Assignment.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

Dated:.....

Accepted.

[Signature, Name and designation of the Attorney]

[Signature and Name of the Consultant/ Consultants with corporate seal]

FORM TECH-10

FORMAT FOR SEEKING CLARIFICATIONS/ PRE-PROPOSAL QUERIES

Name of the Consultants:

Address:

Dated: Telephone

Nos.: Fax No:

Mobile No:

Email ID:

S.No.	Section No. – Clause No. – Paragraph/ Bullet No.	Corresponding page no in the RFP/ Proposal Loading Document	Particulars of the query / clarification	Remarks of Procuring Entity

[Signature of the Authorized Signatory]

Designation

[The queries may be submitted by post or e-mail (through official e-mail IDs only) in word document (not a PDF) to the address/ e-mail of the Procuring Entity latest by 7 Days before the date of Pre-proposal Conference].

Financial Proposal - Standard Forms

{*Notes to Consultant* shown in brackets { } provide guidance to the Consultant to prepare the Financial Proposals; they should not appear on the Financial Proposals to be submitted.}

Financial Proposal Standard Forms shall be used for the preparation of the Financial Proposal according to the instructions provided in Section I, Instructions to Consultants.

FIN-1 Financial

ProposalSubmissionFormFIN-2 Summary

of Costs

FIN-3 Breakdown of Remuneration, including Appendix A“ Financial Negotiations - Breakdown of Remuneration Rates” in the case of QBS method

FIN-4 Reimbursable expenses

FORMFIN-1
FINANCIAL PROPOSAL SUBMISSION FORM

{Location, Date}

To: [Name and address of Client]

Dear Sirs:

We, the undersigned, offer to provide the consulting services for [Insert title of assignment] in accordance with your Request for Proposal dated [Insert Date] and our Technical Proposal.

Our attached Financial Proposal is for the amount of {Indicate the corresponding amount(s) with currency(ies)} {Insert amount(s) in words and figures}, [Insert "including" or "excluding"] of all indirect local taxes in accordance with Clause

5.5.1. in the Proposal Data Sheet. {Please note that all amounts shall be the same as in Form FIN-2}.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal, i.e. before the date indicated in Clause 3.6.1 of the Proposal Data Sheet.

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

We remain, Yours

sincerely,

Authorized Signature {In full and initials}: _____
Name and Title of Signatory: _____ In
the capacity of: _____
Address: _____ E-
mail: _____

{For a **Joint Venture/ Consortium/Association**, either all members shall sign or only the lead member/consultant, in which case the power of attorney to sign on behalf of all members shall be attached}

FORM FIN-2 SUMMARY OF COSTS

Item	Cost			
	{Consultant must state the proposed Costs in accordance with Clause 5.4.1 of the Proposal Data Sheet; delete columns which are not used}			
	{Insert Foreign Currency # 1, if used}	{Insert Foreign Currency # 2, if used}	{Insert Foreign Currency # 3, if used}	{Insert Local Currency}
Cost of the Financial Proposal				
Including :				
(1) Remuneration				
(2) Reimbursables, if applicable				
<u>Total Cost of the Financial Proposal:</u> {Should match the amount in Form FIN-1}				
Indirect Local Tax Estimates – to be discussed and finalized at the negotiations if the Contract is awarded				
(i) {insert type of tax- e.g., service tax, VAT or sales tax}				
(ii) {e.g., income tax on non-resident experts}				
(iii) {insert type of tax}				
<u>Total Estimate for Indirect Local Tax:</u>				

Footnote: Payments will be made in the currency(ies) expressed above (Reference to ITC clause 5.4.1)

Appendix A. Financial Negotiations - Breakdown of Remuneration Rates

1. Review of Remuneration Rates

1.1. The remuneration rates are made up of salary or a base fee, social costs, overheads, profit, and any premium or allowance that may be paid for assignments away from headquarters or a home office. An attached Sample Form can be used to provide a breakdown of rates.

1.2. If the RFP requests submission of a technical proposal only, the Sample Form is used by the selected Consultant to prepare for the negotiations of the Contract. If the RFP requests submission of the financial proposal, the Sample Form shall be completed and attached to the Financial Form-3. Agreed (at the negotiations) breakdown sheets shall form part of the negotiated Contract and included in its Appendix C.

1.3. At the negotiations the firm shall be prepared to disclose its audited financial statements for the last three years, to substantiate its rates, and accept that its proposed rates and other financial matters are subject to scrutiny. The Client is charged with the custody of public funds and is expected to exercise prudence in the expenditure of these funds.

1.4. Rate details are discussed below:

(i) Salary is the gross regular cash salary or fee paid to the individual in the firm's home office. It shall not contain any premium for work away from headquarters or bonus (except where these are included by law or government regulations).

(ii) Bonuses are normally paid out of profits. To avoid double counting, any bonuses shall not normally be included in the "Salary" and should be shown separately. Where the Consultant's accounting system is such that the percentages of social costs and overheads are based on total revenue, including bonuses, those percentages shall be adjusted downward accordingly. Where national policy requires that 13 months' pay be given for 12 months' work, the profit element need not be adjusted downward. Any discussions on bonuses shall be supported by audited documentation, which shall be treated as confidential.

(iii) Social Charges are the costs of non-monetary benefits and may include, inter alia, social security (including pension, medical, and life insurance costs) and the cost of unpaid sick and/or annual leave. In this regard, a paid leave during public holidays or an annual leave taken during an assignment if no Expert's replacement has been provided is not considered social charges.

(iv) Cost of Leave. The principles of calculating the cost of total days leave per annum as a percentage of basic salary is normally calculated as follows:

Leave cost as percentage of salary = $\frac{\text{totaldaysleavex100}}{[365-w-ph-v-s]}$

Where w = weekends, ph = public holidays, v = vacation, and s = sick leave

Please note that leave can be considered as a social cost only if the Client is not charged for the leave taken.

(i) Overheads are the Consultant's business costs that are not directly related to the execution of the assignment and shall not be reimbursed as separate items under the Contract. Typical items are home office costs (non-billable time, time of senior Consultant's staff monitoring the project, rent of headquarters' office, support staff, research, staff training, marketing, etc.), the cost of Consultant's personnel not currently employed on revenue-earning projects, taxes on business activities, and business promotion costs. During negotiations, audited financial statements, certified as correct by an independent auditor and supporting the last three years' overheads, shall be available for discussion, together with detailed lists of items making up the overheads and the percentage by which each relates to basic salary. The Client does not accept an add-on margin for social charges, overhead expenses, etc. for Experts who are not permanent employees of the Consultant. In such case, the Consultant shall be entitled only to administrative costs and a fee on the monthly payments charged for sub-contracted Experts.

(ii) Profit is normally based on the sum of the Salary, Social costs, and Overheads. If any bonuses paid on a regular basis are listed, a corresponding reduction shall be made in the profit amount. Profit shall not be allowed on travel or any other reimbursable expenses.

(iii) Away from Home Office Allowance or Premium or Subsistence Allowances. Some Consultants pay allowances to Experts working away from headquarters or outside of the home office. Such allowances are calculated as a percentage of salary (or a fee) and shall not draw overheads or profit. Sometimes, by law, such allowances may draw social costs. In this case, the amount of this social cost shall still be shown under social costs, with the net allowance shown separately.

UNDP standard rates for the particular country may be used as reference to determine subsistence allowances.

Sample Form

Consultant:
Assignment:

Country:
Date:

Consultant's Representations Regarding Costs and Charges

We hereby confirm that:

- (a) the basic fees indicated in the attached table are taken from the firm's payroll records and reflect the current rates of the Experts listed which have not been raised other than within the normal annual pay increase policy as applied to all the Consultant's Experts;
- (b) attached are true copies of the latest pay slips of the Experts listed;
- (c) the away- from- home office allowances indicated below are those that the Consultant and as agreed to pay for this assignment to the Experts listed;
- (d) the factors listed in the attached table for social charges and overhead are based on the firm's average cost experiences for the latest three years as represented by the firm's financial statements; and
- (e) said factors for overhead and social charges do not include any bonuses or other means of profit-sharing.

[Name of Consultant]

Signature of Authorized Representative

Date

Name: _____

Title: _____

**Consultant’s Representations Regarding Costs and Charges
(Model Form I)**

(Expressed in {insert name of currency*})

Personnel		1	2	3	4	5	6	7	8
Name	Position	Basic Remuneration Rate per Working Month/Day/Hour	Social Charges ¹	Overhead ¹	Subtotal	Profit ²	Away from Home Office Allowance	Proposed Fixed Rate per Working Month/Day/Hour	Proposed Fixed Rate per Working Month/Day/Hour ¹
Home Office									
Client’s Country									

{* If more than one currency is used, use additional table(s), one for each currency}

1. Expressed as percentage of 1
2. Expressed as percentage of 4

FORM FIN-4 BREAKDOWN OF REIMBURSABLE EXPENSES

When used for Lump-Sum contract assignment, information to be provided in this Form shall only be used to demonstrate the basis for calculation of the Contract ceiling amount, to calculate applicable taxes at contract negotiations and, if needed, to establish payments to the Consultant for possible additional services requested by the Client. This form shall not be used as a basis for payments under Lump-Sum contracts

B. Reimbursable Expenses _____								
N°	Type of Reimbursable Expenses	Unit	Unit Cost	Quantity	{Currency # 1- as in FIN-2}	{Currency # 2- as in FIN-2}	{Currency# 3- as in FIN-2}	{Local Currency- as in FIN-2}
	{e.g., Per diem allowances**}	{Day}						
	{e.g., International flights}	{Ticket}						
	{e.g., In/out airport transportation}	{Trip}						
	{e.g., Communication costs between Insert place and Insert place}							
	{ e.g., reproduction of reports}							
	{e.g., Office rent}							
							
	{Training of the Client’s personnel – if required in TOR}							
Total Costs								

** “Per diem allowance” is paid for each night the expert is required by the Contract to be away from his/her usual place of residence. Client can set up a ceiling.

Section VA: General Conditions of Contract

1.General			
S. No.	Particulars	Clause	Description
1.1	Definitions		Unless the context otherwise requires, the following terms wherever used in this Contract have the following meanings:
		1.1.1	“Act” means the Transparency In Public Rajasthan Procurement Act,2012.
		1.1.2	“Applicable Law” means the Central or State laws and any other instruments having the force of law in India and Rajasthan or any other area of operation of the Contract as they may be, issued and in force from time totime.
		1.1.3	“Client” means the Procuring Entity with which the selected Consultant signs the Contract for the Services.
		1.1.4	“Consultant” means the Consultants who may be any entity or person including any Sub-Consultant and other personnel that may provide the Services to the Client under the Contract.
		1.1.5	“Contract” means the legally binding written agreement as signed by the Parties, that are these General Conditions of Contract (GCC), the Special Conditions of Contract (SCC), Proposal Loading Forms, Appendices and all the attached documents.
		1.1.6	“Day” means a calendar day, unless indicated otherwise in the SCC.
		1.1.7	“Effective Date” means the date on which this Contract comes into force and effect.
		1.1.8	“Experts” means, collectively, Key Experts, Non-Key Experts, or any other personnel of the Consultant, Sub-consultant or JV member(s) assigned by the Consultant to perform the Services or any part thereof under the Contract.
		1.1.9	“Foreign Currency” means any currency other than the Indian Rupees.
		1.1.10	“GCC” mean these General Conditions of Contract.

		1.1.11	“In writing” means communicated in written form as a letter, E-mail, fax to the specified address, contact id with proof of receipt.
		1.1.12	“Joint Venture (JV)” means an association with a legal personality distinct from that of its members, of more than one entity where one member has the authority to conduct all businesses for and on behalf of any and all the members of the JV, and where the members of the JV are jointly and severally liable to the Client for the performance of the Contract.
		1.1.13	“Key Expert(s)” or “Key Personnel” means an individual professional whose skills, qualifications, knowledge and experience are critical to the performance of the Services under the Contract and whose Curricula Vitae (CV) were taken into account in the technical evaluation of the Consultant’s proposal.
		1.1.14	“Local Currency” means Indian Rupees.
		1.1.15	“Member” means any of the entities that make up the Joint Venture/ Consortium/ Association; and “Members” means all these entities.
		1.1.16	“Non-Key Expert(s)” or “Non-Key Personnel” means an individual professional provided by the Consultant or its Sub- consultant to perform the Services or any part thereof under the Contract.
		1.1.17	“Party” means the Client or the Consultant, as the case may be, and “Parties” means both of them.
		1.1.18	“Personnel” means professionals and support staff in the form of Key Personnel and Non-Key Personnel provided by the Consultant or by any Sub-Consultant and assigned to perform the Services or any part thereof; “Foreign Personnel” means such professionals and support staff who at the time of being so provided had their domicile outside India; “Local Personnel” means such professionals and support staff who at the time of being so provided had their domicile in India.
		1.1.19	“Reimbursable expenses” where applicable means all assignment-related costs other than Consultant’s remuneration.
		1.1.20	“Rules” means the Rajasthan Transparency in Public Procurement Rules, 2013.
		1.1.21	“SCC” means the Special Conditions of Contract by which the GCC may be amended or supplemented.

		1.1.22	“Services” means the work to be performed by the Consultant pursuant to this Contract.
		1.1.23	“Sub-Consultants” means any person or entity to whom the Consultant, with the approval of the Client, subcontracts any part of the Services while remaining solely liable for the execution of the Contract.
		1.1.24	“Third Party” means any person or entity other than the Government, the Client, the Consultant or a Sub-Consultant.
2. Interpretation			
S.No.	Particulars	Clause	Description
2.1	Relationship Between the Parties	2.1.1	Nothing contained herein shall be construed as establishing a relationship of master and servant or of principal and agent as between the Client and the Consultant. The Consultant, subject to this Contract, has complete charge of Experts, Personnel and Sub-Consultants, if any, performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.
2.2	Law Governing the Contract	2.2.1	This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Laws .
2.3	Language	2.3.1	This Contract has been executed in the language specified in the SCC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.
2.4	Headings	2.4.1	The headings shall not limit, alter or affect the meaning of this Contract.
2.5	Notices, Communications	2.5.1	Any communication, notice, request or consent required or permitted to be given or made pursuant to this Contract shall be In Writing. Any such notice, request or consent shall be deemed to have been given or made when delivered personally, posted, e-mailed, faxed to an authorized representative of the Party to whom the communication is addressed, or when sent to such Party at the address specified in the SCC.
		2.5.2	A Party may change its address for notice hereunder by giving the other Party a notice In Writing of such change to the address specified in the SCC.

2.6	Location	2.6.1	The Services shall be performed at such locations as are specified in Appendix A hereto and, where the location of a particular task is changed, at such locations, whether in the India or elsewhere, as the client may approve.
2.7	Authority of Member in Charge or Team Leader	2.7.1	In case the Consultant consists of a Joint Venture/ Consortium/ Association of more than one entity, the Members hereby authorize the entity specified in the SCC to act on their behalf in exercising all the Consultant's rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments in the joint name from the Client.
2.8	Authorized Representatives	2.8.1	Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract by the Client or the Consultant may be taken or executed by the Authorized Representatives specified in the SCC.

3. Code of Integrity

S.No.	Particulars	Clause	Description
.1	Code of Integrity	3.1.1	<p>It is required that Consultant observes the highest standards of ethics during the procurement process and performance of the Contract with strict compliance to the provisions of Code of Integrity specified in the Act and the Rules. In particular, the Consultant, Sub-Consultants, or their personnel shall-</p> <ul style="list-style-type: none"> (a) not offer any bribe, reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or performance of the Contract or to otherwise influence the Client/Procuring Entity; (b) not misrepresent or omit that misleads or attempt to mislead so as to obtain a financial or other benefit or avoid an obligation in performance of the Contract; (c) not indulge in any collusion, Proposal rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process and performance of the Contract; (d) not misuse any information shared between the procuring Entity and the Consultant with an intent to gain unfair advantage in the procurement process and performance of the Contract; (e) not indulge in any coercion including impairing or harming or threatening to do the same, directly or

			<p>indirectly, to any party or to its property to influence the procurement process and performance of the Contract;</p> <p>(f) not obstruct any investigation or audit of a procurement process and performance of the Contract;</p> <p>(g) disclose conflict of interest, if any; and</p> <p>(h) Disclose any previous transgressions with any Entity in India or any other country during the last three years or any debarment by any other procuring Entity.</p> <p>Further, none of them shall indulge in corrupt, fraudulent, coercive and collusive practices. For the purpose of this clause these practices are defined as below:</p> <p>i. "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;</p> <p>ii. "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;</p> <p>iii. "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;</p> <p>iv. "collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.</p>
3.2	Measures to be Taken On Breach Of Code of Integrity	3.2.1	<p>Breach of Code of Integrity by the Consultant, Sub-Consultants, or their personnel:- Without prejudice to the provisions of Chapter IV of the Rajasthan Transparency in Public Procurement Act, in case of any breach of the Code of Integrity by the Consultant, Sub-Consultants, or their personnel, the Procuring Entity may take appropriate action in accordance with the provisions of sub-section (3) of section 11 and Chapter IV of the said Act.</p>
4. Commencement, Completion, Modification and Expiration of Contract			
S.No.	Particulars	Clause	Description
4.1	Effectiveness of Contract	4.1.1	<p>This Contract shall come into force and effect on the date (the "Effective Date") on which the Client issues to the Consultant the Letter of Acceptance of his Proposal. The notice to commence the Services, if issued separately, shall confirm that the effectiveness conditions, if any, listed in the SCC have been met.</p>

4.2	Forfeiture of Performance Security	4.2.1	<p>Amount of the Performance Security in full or part may be forfeited in the following cases :-</p> <p>(a) when the Consultant does not execute the agreement in accordance with ITC Sub-Clause 9.1 [Award of Contract] within the specified time; after issue of letter of acceptance of offer;or</p> <p>(b) when the Consultant fails to commence the Services as per Letter of Award within the time specified;or</p> <p>(c) when the Consultant fails to complete the Services satisfactorily within the time specified;or</p> <p>(d) when any terms and conditions of the contract is breached; or</p> <p>(e) to adjust any accepted dues against the Consultant from any other contract with the Procuring Entity;or</p> <p>(f) if the Consultant breaches any provision of the Code of Integrity prescribed for Consultantss in the Act and Chapter VI of the Rules and GCC Sub-Clause3.1.1</p> <p>Notice of reasonable time will be given in case of forfeiture of Performance Security. The decision of the Procuring Entity in this regard shall be final.</p>
4.3	Expiration of Contract	4.3.1	<p>Unless terminated earlier, this Contract shall expire at the end of such time period after the Effective Date as specified in the SCC.</p>
4.4	Entire Agreement	4.4.1	<p>This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.</p>
4.5	Modifications or Variations	4.5.1	<p>Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any proposals for modification or variation made by the other Party.</p>
		4.5.2	<p>In cases of substantial modifications or variations, the prior written consent of the competent authority of the Procuring Entity will be required.</p>
5. Force Majeure			
S.No.	Particulars	Clause	Description

5.1	Definition	5.1.1	For the purposes of this Contract, “Force Majeure” means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and which makes a Party’s performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and subject to those requirements includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse 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.
		5.1.2	Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party’s Experts, Sub-Consultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected both to take into account at the time of the conclusion of this Contract, and avoid or overcome in the carrying out of its obligations hereunder.
		5.1.3	Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.
5.2	No Breach of Contract Due to Force Majeure	5.2.1	The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under, this Contract in so far as such in ability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract.
5.3	Measures to be Taken	5.3.1	A Party affected by an event of Force Majeure shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall take all reasonable measures to minimize the consequences of any event of Force Majeure.
		5.3.2	A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any case not later than fourteen (14) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give written notice of the restoration of normal conditions as soon as possible.
		5.3.3	Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

		5.3.4	During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant, upon instructions by the Client, shall either: a. demobilize, in which case the Consultant shall be reimbursed for additional costs they reasonably and necessarily incurred, and, if required by the Client, in reactivating the Services; or b. continue with the Services to the extent possible, in which case the Consultant shall continue to be paid under the terms of this Contract and be reimbursed for additional costs reasonably and necessarily incurred.
		5.3.5	In the case of disagreement between the Parties as to the existence or extent of Force Majeure, the matter shall be settled through Dispute Resolution Mechanism.
5.4	Suspension	5.4.1	The Client may, by written notice of suspension to the Consultant, suspend all payments to the Consultant hereunder if the Consultant fails to perform any of its obligations under this Contract, including the carrying out of the Services, provided that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultant to remedy such failure within a period not exceeding thirty (30) Days after receipt by the Consultant of such notice of suspension.
6. Termination			
S.No.	Particulars	Clause	Description
6.1	By the Client	6.1.1	The Client may terminate this Contract in case of the occurrence of any of the events specified in paragraphs mentioned below. In such an occurrence the Client shall give a not less than thirty (30) <u>days</u> ' written notice of termination to the Consultant in case of the events referred to in (a) through (d), sixty (60) <u>days</u> ' in the case of the event referred to in (e), fourteen (14) <u>days</u> ' in the case of the event referred to in (f) and (g), and five (5) <u>days</u> ' in the case of the event referred to in (h),:

			<ul style="list-style-type: none"> (a) If the Consultant fails to remedy a failure in the performance of its obligations under the Contract, as specified in the notice of termination, within thirty (30) Days of receipt of such notice of termination or with in such further period as the Client may have subsequently approved In Writing. (b) If the Consultant becomes (or, if the Consultant consists of more than one entity, if any of its Members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary. (c) If the Consultant fails to comply with any final decision reached as a result of Dispute Resolution Mechanism or arbitration proceedings, where permissible. (d) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60)days. (e) If the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract. (f) If the Consultant, in the judgment of the Client, has breached any provision of the Code of Integrity as given in GCC Clause 3 or engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for or in executing this Contract. (g) If the Consultant submits to the Client a false statement/ document which has a material effect on the rights, obligations or interests of the Client. (h) If the Consultant fails to confirm availability of Key Experts as required in GCC Clause4.3.1.
		6.1.2	<p>Termination by the Client due to failure of the Consultant to provide the required Services shall lead to the forfeiture of the Performance Security as per GCC Sub-Clause 4.2 [Forfeiture of Performance Security] and get the Services performed by another agency at the risk and cost of the original Consultant.</p>

<p>6.2</p>	<p>By the Consultant</p>	<p>6.2.1</p>	<p>The Consultant may terminate this Contract, by not less than thirty (30) <u>days</u>' written notice to the Client, in case of the occurrence of any of the events specified as under:</p> <ul style="list-style-type: none"> (a) If the Client fails to pay any money due to the Consultant pursuant to this Contract and not subject to dispute within forty-five (45) Days after receiving written notice from the Consultant that such payment is overdue. (b) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60)days. (c) If the Client fails to comply with any final decision reached as a result of Dispute Resolution Mechanism or arbitration, where permissible. (d) If the Client is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Consultant may have subsequently approved In Writing) following the receipt by the Client of the Consultant's notice specifying such breach.
<p>6.3</p>	<p>Cessation of Rights and Obligations</p>	<p>6.3.1</p>	<p>Upon termination of this Contract pursuant to GCC Clause 6 hereof, or upon expiration of this Contract pursuant to GCC Clause 4.3, all rights and obligations of the Parties hereunder shall cease, except:</p> <ul style="list-style-type: none"> (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in GCC Clause 7.7, (iii) the Consultant's obligation to permit inspection, copying and auditing of their accounts and records by the Client set forth in GCC Clause 7.10, and (iv) any right which a Party may have under the Applicable Law.
<p>6.4</p>	<p>Cessation of Services</p>	<p>6.4.1</p>	<p>Upon termination of this Contract by notice of either Party to the other pursuant to GCC Clause 6.1 or 6.2, the Consultant shall, immediately upon despatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultant and equipment and materials furnished by the Client, the Consultant shall proceed as provided, respectively, by GCC Clause 7.13 or 7.14.</p>

6.5	Payment upon Termination	6.5.1	Subject to the GCC Clause 3.2.1 [Measures to be Taken on Breach of Code of Integrity], upon termination of this Contract, the Client shall make the following payments to the Consultant: (a) payment for Services satisfactorily performed prior to the effective date of termination; and (b) in the case of termination pursuant to paragraphs(d)and (e) of GCC Clause 6.1.1, reimbursement of any reasonable cost incidental to the prompt and orderly termination of this Contract, including the cost of the return travel of the Experts.
6.6	Disputes about Events of Termination	6.6.1	If either Party disputes whether an event has occurred, such Party may, within forty-five (45) Days after receipt of noticeof termination from the other Party, may take recourse to Dispute Resolution Mechanism, and in that case this Contract shall not be terminated on account of such event except in accordance with the terms of any resulting award in accordance with the Dispute Resolution Mechanism or arbitration, where permissible.
6.7	Extension in Completion Period and Liquidated Damages	6.7.1	If the Consultant considers at any time during the performance of the Contract that it is unable to meet the agreed dates and deadlines set forth for various deliverables due to occurrence of an event of Force Majeure or any other reasons, it may requestinwritingwithin14(Fourteen)daysoftheoccurrenceof cause of hindrance to the Client to extend the completion period of period of the Contract giving detailed reasons and justifications. The Client after considering the reasons and justifications, may extend the period set forth forcompletion of the contract with or without liquidated damages. The Procuring Entity, except in case of an event of Force Majeure or reasons beyond the control of the Consultant, shall be entitled to impose on the consultant, liquidated damages of 1% of the Contract amount for each week of delay after the stipulated period of completion of the Contract. However the liquidated damages shall not exceed a total of 10% of the Contract amount.
7. Obligations of the Consultant			
S.No.	Particulars	Clause	Description

7.1	Standard of Performance	7.1.1	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 standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, approved professionals, machinery, materials and methods. The Consultant shall always act, in respect of any matter relating to this Contract or to the Services, as faithful adviser to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with Sub-Consultants or Third Parties. No decision regarding design or incidental thereto of the consultant should cause any loss to the Client. All designs, drawings and the estimates should provide optimum value to the Client.
		7.1.2	The Consultant shall employ and provide such qualified and experienced Experts and Sub-consultants as are required to carry out the Services.
		7.1.3	The Consultant may subcontract part of the Services to an extent and with such Key Experts and Sub-consultants as may be approved in advance by the Client. Notwithstanding such approval, the Consultant shall retain full responsibility for the Services.
7.2	Law Governing Services	7.2.1	The Consultant shall perform the Services in accordance with the Contract and the Applicable Law and shall take all practicable steps to ensure that any of its Experts and Sub-Consultants, as well as the Personnel of the Consultant and any Sub-Consultants comply with the Applicable Law.
		7.2.2	The Client shall notify the Consultant In Writing of relevant local customs, and the Consultant shall, after such notification, respect such customs.
7.3	Conflict of Interests	7.3.1	The Consultant shall hold the Client's interests paramount, without any consideration for future work, and strictly avoid conflict with other assignments or their own corporate interests.

7.4	Consultant Not to Benefit from Commissions, Discounts, etc	7.4.1	The payment of the Consultant pursuant to GCC Clause 10 shall constitute the Consultant's only payment in connection with this Contract and, the Consultant shall not accept for its own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or in the discharge of its obligations hereunder, and the Consultant shall use its best efforts to ensure that any Sub- Consultants, as well as the Experts/ Personnel and agents of either of them, similarly shall not receive any such additional payment.
		7.4.2	Furthermore, if the Consultant, as part of the Services, has the responsibility of advising the Client on the procurement of goods, works or services, the Consultant shall comply with the Procuring Entity's procurement rules and guidelines, and shall at all times exercise such responsibility in the best interest of the Client. Any discounts or commissions negotiated by the Consultant in the exercise of such procurement advisory responsibility shall be for the account of the Client.
7.5	Consultant and Affiliates Not to be Otherwise Interested in Project, Not to Engage in Certain Activities	7.5.1	The Consultant agrees that, during the term of this Contract and after its completion or termination, the Consultant and any entity affiliated with the Consultant, as well as any Sub-Consultants and any entity affiliated with such Sub-Consultants, shall be disqualified from providing goods, works or non-consulting services resulting from or directly related to the Consultant's Services for the preparation or implementation of the project, unless otherwise indicated in the SCC.
7.6	Prohibition of Conflicting Activities	7.6.1	The Consultant shall not engage, and shall cause its Experts, Personnel as well as Sub-Consultants and their Personnel not to engage, either directly or indirectly, in any business or professional activities that would conflict with the activities assigned to them under this Contract.
		7.6.2	The Consultant has an obligation and shall ensure that its Experts and Sub-consultants shall have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of the Client, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Consultant or the termination of its Contract, in addition to any action which may be taken under the provisions of the Act and the Rules.

7.7	Confidentiality	7.7.1	In addition to the provisions of Section 49 of the Act and Rule 77 of the Rules, except with the prior written consent of the Client, the Consultant and the Experts or Personnel shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the Consultant and the Experts or Personnel make public the recommendations formulated in the course of, or as a result of, the Services.
7.8	Liability of the Consultant	7.8.1	Subject to additional provisions, if any, set forth in the SCC, the Consultant's liability under this Contract shall be provided by the Applicable Law.
7.9	Insurance to be Taken out by the Consultant	7.9.1	<p>The Consultant:</p> <ul style="list-style-type: none"> (i) shall take out and maintain, and shall cause any Sub-Consultants to take out and maintain, in the joint name of the Client and himself, upto the final completion of the Contract at their (or the Sub-Consultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against all the risks, personnel, vehicles, equipments, etc and for the coverage specified in the SCC; and (ii) at the Client's request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums therefore have been paid. <p>The Consultant shall ensure that such insurance is in place prior to commencing the Services.</p>
7.10	Accounting, Inspection and Auditing	7.10.1	The Consultant shall keep, and shall make all reasonable efforts to cause its Sub-consultants to keep, accurate and systematic accounts and records in respect of the Services and in such form and detail as will clearly identify relevant time changes and costs.
		7.10.2	The Consultant shall permit and shall cause its Sub-consultants to permit, the Procuring Entity or Government of Rajasthan and/or persons appointed by them to inspect the Site and its accounts and records as well as those of its Sub-Consultants relating to the performance of the Contract and the submission of the Proposal to provide the Services, and to have such accounts and records audited by auditors appointed by the Procuring Entity or Government of Rajasthan.

		7.10.3	The Consultant's attention is drawn to the fact that acts of the Consultant intended to impede the exercise of the powers of inspection and audit by the Client constitute a prohibited practice leading to Contract termination.
7.11	Consultant's Actions Requiring Client's Prior Approval	7.11.1	Subcontracts: If permitted in the RFP, the Consultant may subcontract work relating to the Services with such experts and entities as may be approved in advance by the Client. Notwithstanding such approval, the Consultant shall retain full responsibility for the Services. In the event that any Sub-Consultants are found by the Client to be incompetent or incapable in discharging assigned duties, the Client may request the Consultant to provide a replacement, with qualifications and experience equal to or better than those of the Sub-Consultant being replaced and acceptable to the Client, or to resume the performance of the Services itself.
7.12	Reporting Obligations	7.12.1	The Consultant shall submit to the Client the reports and documents specified in Appendix A hereto, in the form, in number and within the time periods set forth in the said Appendix. Final reports shall be delivered in soft copy in addition to the hard copies specified in the said Appendix.
7.13	Proprietary	7.13.1	<p>Unless otherwise indicated in the SCC, all reports and relevant data and information such as maps, drawings, diagrams, databases, other documents and software, supporting records or material compiled plans or prepared by the consultant for the client in the course of the services shall be confidential and become and remain the absolute property of the client.</p> <p>The Consultant shall, not later than upon termination or expiration of this contract, deliver all such documents to the client, together with a detailed inventory thereof.</p> <p>The Consultant may retain a copy of such documents, data and/or software but shall not use the same for purposes unrelated to this Contract without prior written approval of the Client.</p>

		7.13.2	If license agreements are necessary or appropriate between the Consultant and third parties for purposes of development of the plans, drawings, specifications, designs, databases, other documents and software, the Consultant shall obtain the Client's prior written approval to such agreements, and the Client shall be entitled at its discretion to require recovering the expenses related to the development of the program(s) concerned. Other restrictions about the future use of these documents and software, if any, shall be specified in the SCC.
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7.14	Equipment, Vehicles and Materials Provided by the Client	7.14.1	Equipment, vehicles and materials made available to the Consultant by the Client, or purchased by the Consultant wholly or partly with funds provided by the Client, shall be the property of the Client and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultant shall make available to the Client an inventory of such equipment, vehicles and materials and shall dispose of such equipment, vehicles and materials in accordance with the Client's instructions. While in possession of such equipment, vehicles and materials, the Consultant, unless otherwise instructed by the Client In Writing, shall insure them in an amount equal to their full replacement value.
7.15	Equipment and Materials Provided by the Consultant	7.15.1	Any equipment or materials brought by the Consultant or its Experts and Personnel and used either for the Project or personal use shall remain the property of the Consultant or the Experts and Personnel concerned, as applicable.

8. Consultants' Experts, Personnel and Sub-Consultants

S.No.	Particulars	Clause	Description
8.1	Description of Key Experts	8.1.1	The title, agreed job description, minimum qualification and estimated period of engagement to carry out the Services of each of the Consultant's Key Experts are described in Appendix B .
8.2	Replacement of Key Experts	8.2.1	Except as the Client may otherwise agree in writing, no changes shall be made in the Key Experts.

		8.2.2	Notwithstanding the above, the substitution of Key Experts during Contract execution may be considered only based on the Consultant's written request and due to circumstances outside the reasonable control of the Consultant, including but not limited to death or medical incapacity. In such case, the Consultant shall forthwith provide as a replacement, a person of equivalent or better qualifications and experience, and at the same rate of remuneration.
8.3	Removal of Experts or Sub-consultants	8.3.1	If the Client finds that any of the Consultant's or Sub-consultant's personnel has committed serious misconduct or has been charged with having committed a criminal action, or shall the Client determine that Consultant's or Sub-consultant's personnel have engaged in corrupt, fraudulent, collusive, coercive or obstructive practice while performing the Services, the Consultant shall, at the Client's written request, provide a replacement
		8.3.2	In the event that any of the Consultant's or Sub-consultant's Expert is found by the Client to be incompetent or incapable in discharging assigned duties, the Client, specifying the grounds therefore, may request the Consultant to provide a replacement.
		8.3.3	Any replacement of the removed Experts or Sub-consultants shall possess better qualifications and experience and shall be acceptable to the Client.
		8.3.4	The Consultant shall bear all costs arising out of or incidental to any removal and/or replacement of such Experts.
8.4	Resident Project Manager	8.4.1	If required by the SCC, the Consultant shall ensure that at all times during the Consultant's performance of the Services a resident project manager, acceptable to the Client, shall take charge of the performance of the Services.
9. Obligations of the Client			
S.No.	Particulars	Clause	Description
9.1	Assistance and Exemptions	9.1.1	Unless otherwise specified in the SCC, the Client shall use its best efforts to:
		9.1.1.1	Assist the Consultant in obtaining work permits and such other documents as shall be necessary to enable the Consultant to perform the Services.

		9.1.1.2	Assist the Consultant in promptly obtaining, for the Experts and, if appropriate, their eligible dependents, all necessary entry and exit visas, residence permits, exchange permits and any other documents required for their stay in India while carrying out the Services under the Contract.
		9.1.1.3	Facilitate prompt clearance through customs of any property required for the Services and of the personal effects of the Experts, Personnel and their eligible dependents.
		9.1.1.4	Issue to officials, agents and representatives of the Government all such instructions and information as may be necessary or appropriate for the prompt and effective implementation of the Services.
		9.1.1.5	Assist the Consultant and the Experts and any Sub-consultants employed by the Consultant for the Services in obtaining exemption from any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity in India according to the applicable law in India.
		9.1.1.6	Assist the Consultant, any Sub-consultants and the Experts of either of them in obtaining the privilege, pursuant to the applicable law in India, of bringing into India reasonable amounts of foreign currency for the purposes of the Services or for the personal use of the Experts and of withdrawing any such amounts as may be earned therein by the Experts in the execution of the Services.
		9.1.1.7	Provide to the Experts of Consultant and Sub-Consultants any such other assistance as may be specified in the SCC.
9.2	Access to Project Site	9.2.1	The Client warrants that the Consultant shall have, free of charge, unimpeded access to project site in respect of which access is required for the performance of the Services.
9.3	Change in the Applicable Law Related to Taxes and Duties	9.3.1	If, after the date of this Contract, there is any change in the Applicable Law with respect to existing or new taxes and duties which increases or decreases the cost incurred by the Consultant in performing the Services, then the remuneration and Reimbursable Expenses otherwise payable to the Consultant under this Contract shall be increased or decreased accordingly by agreement between the Parties hereto, and corresponding adjustments shall be made to the Contract price amount specified in GCC Clause 10.1.1.

9.4	Services, Facilities and Property of the Client	9.4.1	The Client shall make available to the Consultant and the Experts, for the purposes of the Services and free of any charge, the services, facilities and property described in the Terms of Reference (Appendix A) at the times and in the manner specified in said Appendix A .
		9.4.2	In case that such services, facilities and property shall not be made available to the Consultant, the Parties shall agree on: (i) any time extension that it may be appropriate to grant to the Consultant for the performance of the Services, (ii) the manner in which the Consultant shall procure any such services, facilities and property from other sources, and (iii) the additional payments, if any, to be made to the Consultant as a result of it.
9.5	Counterpart Personnel	9.5.1	The Client shall make available to the Consultant free of charge such professional and support counterpart Personnel, to be nominated by the Client with the Consultant's advice, if specified in Appendix A .
		9.5.2	If counterpart Personnel are not provided by the Client to the Consultant, the Client and the Consultant shall agree on: (i) how the affected part of the Services shall be carried out, and (ii) the additional payments, if any, to be made by the Client to the Consultant.
		9.5.3	Professional and support counterpart Personnel, excluding Client's liaison Personnel, shall work under the exclusive direction of the Consultant. If any member of the counterpart Personnel fails to perform adequately any work assigned to such member by the Consultant that is consistent with the position occupied by such member, the Consultant may request the replacement of such member, and the Client shall not unreasonably refuse to act upon such request.
9.6	Payment Obligation	9.6.1	In consideration of the Services performed by the Consultant under this Contract, the Client shall make such payments to the Consultant for the deliverables specified in Appendix A and in such manner as is provided by GCC Clause 10 below.
10. Payments to Consultant			
10.1	Contract Price	10.1.1	The Contract price is fixed and is set forth in the SCC . The Contract price breakdown is provided in Appendix C .

		10.1.2	Any change to the Contract price specified in GCC Clause 10.1.1 can be made only if the Parties have agreed to the revised scope of Services pursuant to GCC Clause 4.6 and have amended in writing the Terms of Reference in Appendix A .
10.2	Payment	10.2.1	In consideration of the Services performed by the Consultant under this Contract as specified in Appendix A , the Client shall make to the Consultant such payments and in such manner as is provided in the Contract. This amount has been established based on the understanding that it includes all of the Consultant's costs and profits as well as any tax obligation that may be imposed on the Consultant.
10.3	Schedule of Payments	10.3.1	The schedule of payments shall be as stated in the SCC
10.4	Reimbursable	10.4.1	No Reimbursable expenses shall be allowed under Lump Sum Contracts, unless specified in the SCC.
10.5	Taxes and Duties	10.5.1	The Consultant, Sub-consultants and Experts are responsible for meeting any and all tax liabilities arising out of the Contract unless it is stated otherwise in the SCC .
		10.5.2	As an exception to the above and if stated in the SCC , all local identifiable indirect taxes (itemized and finalized at Contract negotiations) are reimbursed to the Consultant or are paid by the Client on behalf of the Consultant.
10.6	Currency of Payment	10.6.1	Any payment under this Contract shall be made in the currency (ies) of the Contract.
10.7	Payment for Additional Services	10.7.1	For the purpose of determining the remuneration due for additional Services as may be agreed, a breakdown of the lump- sum price is provided in Appendix C .

10.8	Advance Payment	10.8.1	<p>(a) Normally no advance payment shall be made. If the Advance Payment is stated in SCC, the Advance Payment shall be made after the Consultant has submitted a bank guarantee of a Scheduled Bank in India to the Procuring Entity in the format given in Section VC, Contract Forms and amounts and currencies equal to the Advance Payment. The bank guarantee shall be got confirmed from the issuing bank and shall be valid until the total amount of the Advance Payment is repaid.</p> <p>(b) The amounts and currencies of the Advance Payment shall be as stated in SCC.</p> <p>(c). The Advance Payment shall be repaid through a percentage deduction from the interim payments as stated in SCC.</p>
10.9	Mode of Billing and Payment	10.9.1	<p>The total payments under this Contract shall not exceed the Contract Price set forth in GCC Clause 10.1 and the payments under this Contract shall be made in lump-sum installments against deliverables specified in Appendix A.</p>
		10.9.2	<p><u><i>The Lump-Sum Installment Payments:</i></u>The Client shall pay the Consultant within sixty (60) days after the receipt by the Client of the deliverable(s) and the cover invoice for the related lump- sum installment payment. The payment can be withheld if the Client does not approve the submitted deliverable(s) as satisfactory in which case the Client shall provide comments to the Consultant within the same sixty (60) days period. The Consultant shall thereupon promptly make any necessary corrections, and thereafter the foregoing process shall be repeated.</p>

		10.9.3	<p><u>The Final Payment:</u>The final payment under this Clause shall be made only after the final report have been submitted by the Consultant and approved as satisfactory by the Client. The Services shall then be deemed completed and finally accepted by the Client. The last lump-sum installment shall be deemed approved for payment by the Client within ninety (90) days after receipt of the final report by the Client unless the Client, within such ninety (90) days period, gives written notice to the Consultant specifying in detail deficiencies in the Services, the final report. The Consultant shall thereupon promptly make any necessary corrections, and thereafter the foregoing process shall be repeated.</p> <p>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 Consultant to the Client within thirty (30) Days after receipt by the Consultant 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.</p>
		10.9.4	All payments under this Contract shall be made to the accounts of the Consultant specified in the SCC.
		10.9.5	With the exception of the final payment, payments do not constitute acceptance of the Services nor relieve the Consultant of any obligations hereunder.
11.1	Good Faith	11.1.1	The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realisation of the objectives of this Contract.
12. Settlement of disputes			
S. No.	Particulars	Clause	Description
12.1	Settlement of Disputes	12.1	Dispute Resolution Mechanism shall be as stated Annexure A.

Annexure A: Dispute Resolution Mechanism

Any dispute arising from the Contract shall be resolved amicably, as far as possible. The levels of the Dispute Resolution mechanism shall be as follows:

I. Amicable resolution between representatives of Parties to the Contract

II. If a question, difference or objection arises in connection with or out of the contract agreement or the meaning of operation of any part thereof or the rights, duties or liabilities of either party have not been settled by amicable resolution through mutual discussions, it shall be referred to the appropriate Empowered Dispute Resolution Committee for decision, if the amount of the claim is more than Rs. 50000/-.

Dispute Resolution Mechanism will have the following Committees at the levels of Head of the Department and Administrative Secretary of the Department:

1. Head of the Department Level Committee: to address disputes in contracts of value up to Rs. 10 lakh:

The Head of the Department Level Committee shall comprise of Head of the Department, Financial Advisor/ Chief Accounts Officer of the Department, Concerned Procuring Entity or Additional Head of the Department (Member -Secretary) and Representative of Law Department not below the rank of Legal Assistant.

2. Administrative Secretary Level Committee: to address disputes in contracts of value of more than Rupees 10 lakh.

The Administrative Department Level Committee shall comprise of Administrative Secretary of the Department, Representative of Finance Department not below the rank of Deputy Secretary, Law Secretary or his nominee, not below the rank of Joint Legal Remembrancer, Chief Engineer- cum - Addl. Secretary of the concerned department and Chief Engineer concerned [or Head of the Department, in case of other than a Works Department (Member- Secretary)].

NOTE: In case the Procuring Entity is other than a Department of the State Government, the concerned Administrative Department will decide the levels of various members of the two Dispute Resolution Committees.

III. Arbitration will be applicable in case of disputes arising in contracts above a value of more than Rs. 1 crore which remain unresolved through the Dispute Resolution Committee.

IV. All legal proceedings, if necessary arise to institute by any of the parties shall have to be lodged in courts situated in Rajasthan and not elsewhere.

V. Procedure of reference to the Dispute Resolution Committee:-

The Consultant shall present his representation to the Procuring Entity along with a fee equal to two percent of the amount of dispute, not exceeding Rupees One lakh, within three months of occurrence of the Dispute. The Procuring Entity shall prepare a reply of representation and shall represent its stand before the concerned Dispute Resolution Committee. From the side of the Consultant, the claim case may be presented by himself or through a representative. After hearing both the parties, the Dispute Resolution Committee shall pronounce its decision which shall be final and binding both on the Consultant and the Procuring Entity.

Appendices

APPENDIX A – TERMS OF REFERENCE

[This Appendix shall include the final Terms of Reference (TORs) worked out by the Client and the Consultant during the negotiations; dates for completion of various tasks; location of performance for different tasks; detailed reporting requirements and list of deliverables against which the payments to the Consultant will be made; Client’s input, including counterpart personnel assigned by the Client to work on the Consultant’s team; specific tasks or actions that require prior approval by the Client.]

Insert the text based on the Section IV (Terms of Reference) of the ITC in the RFP and modified based on the Forms TECH-1 through TECH-10 of the Consultant’s Proposal. Highlight the changes to Section IV of the RFP]

.....

APPENDIX B - KEY EXPERTS

[Insert a table based on Form TECH-6 of the Consultant’s Technical Proposal and finalized at the Contract’s negotiations. Attach the CVs (updated and signed by the respective Key Experts) demonstrating the qualifications of Key Experts.]

.....

APPENDIX C – BREAKDOWN OF CONTRACT PRICE

[Insert the table with the unit rates to arrive at the breakdown of the lump-sum price. The table shall be based on Form FIN-3 and FIN-4 of the Consultant’s Proposal and reflects any changes agreed at the Contract negotiations, if any. The footnote shall list such changes made to Form FIN- 3 and FIN-4 at the negotiations or state that none has been made.]

[When the Consultant has been selected under Quality-Based Selection method, also add the following:

“The agreed remuneration rates shall be stated in the attached Model Form I. This form shall be prepared on the basis of Appendix A to Form FIN-3 of the RFP “Consultant’s Representations regarding Costs and Charges” submitted by the Consultant to the Client prior to the Contract’s negotiations.

Should these representations be found by the Client (either through inspections or audits pursuant to GCC Clause 7.10 or through other means) to be materially incomplete or inaccurate, the Client shall be entitled to introduce appropriate modifications in the remuneration rates affected by such materially incomplete or inaccurate representations. Any such modification shall have retroactive effect and, in case remuneration has already

been paid
by the Client before any such modification, (i) the Client shall be entitled to offset any excess payment against the next installment payment to the Consultant, or (ii) if there are no further payments to be made by the Client to the Consultant, the Consultant shall reimburse to the Client any excess payment within thirty (30) days of receipt of a written claim of the Client. 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 GCC Clause 10.9.3 of this Contract.]”

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Model Form I
Breakdown of Agreed Fixed Rates in Consultant's Contract

We hereby confirm that we have agreed to pay to the Experts listed, who will be involved in performing the Services, the basic fees and away from the home office allowances (if applicable) indicated below:

(Expressed in
 [insert name of
 currency])*

Experts		1	2	3	4	5	6	7	8
Name	Position	Basic Remuneration rate per Working Month/Day/Year	Social Charges ¹	Overhead ¹	Subtotal	Profit ²	Away from Home Office Allowance	Agreed Fixed Rate per Working Month/Day/Hour	Agreed Fixed Rate per Working Month/Day/Hour ¹
	Home Office								
	Work in india								

1 Expressed as percentage of 1

2 Expressed as percentage of 4

* If more than one currency, add another table

Signature: _____

Date: _____

Name and Title: _____

Section VB: Special Conditions to Contract

Number of GCC Clause	Amendments of, and Supplements to Clauses in the General conditions of Contract
2.3.1	The language is English
2.5.1 & 2.5.2	<p>The addresses are:</p> <p>Client: Attention: _____ Address: _____ _____ ContactNo. _____ _____ Facsi mile: _____ Email: _____</p> <p>Consultant: _____ Attention: _____ Address: _____ _____ ContactNo. _____ _____ Facsi mile: _____ Email: _____</p>
2.7.1	<p>The Member in Charge of the JV/Consortium/ Association is _____ _____ <i>[insert name, address and contact number of the member incharge]</i></p>
2.8	<p>The Authorized Representatives are:</p> <p>For theClient: _____</p> <p>For theConsultant: _____</p>
4.1.1	<p>The conditions, if any, for the Contract to become effective are:</p> <p>(i) Submission of Performance Security (ii) Issue of Letter to Proceed from the Client</p>
4.2.1	<p>The time period within which the Contract must become effective after signing of the Contract is 7 days.</p>

<p>4.3.1</p>	<p>The time period within which the Consultant must commence the Services after the effective date of the Contract is 15 Days. In case the Consultant fails to commence the services within this time period, the Client after due notice shall terminate the contract and forfeit the Performance Security.</p>
<p>4.4.1</p>	<p>The time period for completion of the Contract shall be 12 (twelve) months.</p>
<p>7.8.1</p>	<p>Limitation of the Consultant' Liability towards the Client: Except in case of gross negligence or willful 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 by the Consultant to the Client's property, shall not be liable to the Client: (i) For any indirect or consequential loss or damage; and (ii) For any direct loss or damage that exceeds by three times the total value of the Contract. (b) This limitation of liability shall not affect the Consultants' 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.</p>
<p>7.9.1</p>	<p>The risks and the coverage by insurance shall be as follows: (a) Third Party motor vehicle liability insurance in respect of motor vehicles operated in India by the Consultant or its Personnel or any Sub-Consultants or their Personnel, with a minimum coverage as per Motor Vehicles Act 1988. (b) Third Party liability insurance, with a minimum coverage of Rs 5.00 (Five) lakh only (c) Professional liability insurance, with a minimum coverage of Rs.40.00 (Forty) Lakh only (d) Procuring Entity's liability and workers' compensation insurance in respect of the Personnel of the Consultant and of any Sub-Consultants, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate; and (e) insurance against loss of or damage to (i) equipment purchased in whole or in part with funds provided under this Contract, (ii) the Consultant's property used in the performance of the Services, and (iii) any documents prepared by the Consultant in the performance of the Services.</p>
<p>8.4.1</p>	<p>The Resident Project Manager is not required to be appointed.</p>
<p>9.1.1</p>	<p>List of assistance to be provided by the Client: None except those have been stated earlier in the RFP</p>

10.1.1	The Contract price is: _____ [insert amount and currency for each currency as applicable] [indicate: inclusive or exclusive] of local indirect taxes.																																
10.3.1	<p>Schedule of payments shall be as under:- (All payments will be made upon approval of the report)</p> <table border="1" data-bbox="334 422 1373 1318"> <thead> <tr> <th data-bbox="334 422 440 541">S.No.</th> <th data-bbox="440 422 789 541">Description</th> <th data-bbox="789 422 1122 541">Delivery Schedule</th> <th data-bbox="1122 422 1373 541">Payment % of the Contract Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="334 541 440 653">1</td> <td data-bbox="440 541 789 653">On submission of Inception Report</td> <td data-bbox="789 541 1122 653">with in 1 month from the start of the Contact start date</td> <td data-bbox="1122 541 1373 653">10%</td> </tr> <tr> <td data-bbox="334 653 440 793">2</td> <td data-bbox="440 653 789 793">On submission of draft feasibility report including strip plan and utility relocation plan</td> <td data-bbox="789 653 1122 793">with in 4 months from the start of the Contact start date</td> <td data-bbox="1122 653 1373 793">20%</td> </tr> <tr> <td data-bbox="334 793 440 913">3</td> <td data-bbox="440 793 789 913">On Submission of draft preliminary project report and land acquisition report</td> <td data-bbox="789 793 1122 913">with in 6 months from the start of the Contact start date</td> <td data-bbox="1122 793 1373 913">10%</td> </tr> <tr> <td data-bbox="334 913 440 1033">4</td> <td data-bbox="440 913 789 1033">On submission of Draft Detailed Project Report and Bidding documents</td> <td data-bbox="789 913 1122 1033">with in 9 months from the start of the Contact start date</td> <td data-bbox="1122 913 1373 1033">20%</td> </tr> <tr> <td data-bbox="334 1033 440 1152">5</td> <td data-bbox="440 1033 789 1152">On approval of Final Detailed Project Report and Bidding Documents</td> <td data-bbox="789 1033 1122 1152">with in 10 months from the start of the Contact start date</td> <td data-bbox="1122 1033 1373 1152">20%</td> </tr> <tr> <td data-bbox="334 1152 440 1272">6</td> <td data-bbox="440 1152 789 1272">On submission of required project clearances from the concerned agencies</td> <td data-bbox="789 1152 1122 1272">with in 12 months from the start of the Contact start date</td> <td data-bbox="1122 1152 1373 1272">20%</td> </tr> <tr> <td data-bbox="334 1272 440 1318"></td> <td data-bbox="440 1272 789 1318">Total</td> <td data-bbox="789 1272 1122 1318"></td> <td data-bbox="1122 1272 1373 1318">100%</td> </tr> </tbody> </table>	S.No.	Description	Delivery Schedule	Payment % of the Contract Value	1	On submission of Inception Report	with in 1 month from the start of the Contact start date	10%	2	On submission of draft feasibility report including strip plan and utility relocation plan	with in 4 months from the start of the Contact start date	20%	3	On Submission of draft preliminary project report and land acquisition report	with in 6 months from the start of the Contact start date	10%	4	On submission of Draft Detailed Project Report and Bidding documents	with in 9 months from the start of the Contact start date	20%	5	On approval of Final Detailed Project Report and Bidding Documents	with in 10 months from the start of the Contact start date	20%	6	On submission of required project clearances from the concerned agencies	with in 12 months from the start of the Contact start date	20%		Total		100%
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10.4.1	No reimbursable expenses is allowed for payment.																																
10.5.1 & 10.5.2	<p>Any indirect local taxes chargeable in respect of this Contract for the Services provided by the Consultant, Sub-Consultants and Experts other than Indian citizens and Non Resident Indians shall [insert as appropriate: "be paid" or "reimbursed"] by the Client [insert as appropriate: "for" or "to"] the Consultant.</p> <p>The amount of _____ [insert the amount as finalized at the Contract's negotiations on the basis of the estimates provided by the Consultant in Form FIN-2 of the Consultant's Financial Proposal.</p>																																
10.5.2	Only GST will be paid to the contractor as per prevalent rate.																																
10.8.1	Whether an Advance payment will be made :No																																

10.9.4	The accounts are (to be filled in by the Consultant): for local currency: <i>[insert account details]</i>

Section V C: Contract Forms

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5.1 Contract Agreement

(To be executed on Non-Judicial Stamp Paper of
appropriate value)

Contract for Consultancy Services Lump-Sum

between

[Name of the Client]

and

[Name of the Consultant]

Dated:

CONTRACT AGREEMENT

This CONTRACT (hereinafter called the "Contract") is made the [day number] day of the month of [month], [year], between, on the one hand, [name of Client (Procuring Entity)] (hereinafter called the "Client") and, on the other hand, [name of Consultant] (hereinafter called the "Consultant").

[Note: If the Consultant consist of more than one entity, the above should be partially amended to read as follows: "...(hereinafter called the "Client") and, on the other hand, a joint venture/consortium/association consisting of the following entities, each of which will be jointly and severally liable to the Client for all the Consultant's obligations under this Contract, namely, [name of Consultant] and [name of Consultant] (hereinafter called the "Consultant").]

WHEREAS:

- (a) The Client has requested the Consultant to provide certain consulting services as defined in this Contract (herein after called the "Services")
- (b) The Consultant, having presented to the Client that it has the qualified professional skills, expertise and technical resources, has agreed to provide the Services on terms and conditions set forth in this Contract;

NOW THEREFORE the parties hereto hereby agree as follows:

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

Appendix A: Terms of Reference
Appendix B: Key Experts
Appendix C: Breakdown of Contract Price

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

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

5.2 Performance Security

[To be given by a Scheduled Bank in India or other Issuer acceptable to the Procuring Entity]

Date: _____ Contract Name and No.: _____

WHEREAS _____ (hereinafter "the Consultant") has undertaken, pursuant to Contract No. _____ dated _____, _____ to provide consultancy services _____ (hereinafter "the Contract").

AND WHEREAS it has been stipulated by you in the aforementioned Contract that the Consultant shall furnish you with a Security _____ issued by a reputable guarantor for the sum specified therein as Security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS the undersigned _____, legally domiciled in _____, (hereinafter "the Guarantor"), have agreed to give the Supplier a Security:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Consultant, up to a total of _____ and we undertake to pay you, upon your first written demand declaring the Consultant to be in default under the Contract, without cavil or argument, any sum or sums within the limit of _____ as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This Security is valid until the _____ day of _____, .

Name _____

In the capacity of _____

Signed _____ Duly

Authorized to sign the Security for and on behalf of _____ Date

Bank's Seal

5.2 Performance Security Declaration

Performance Security Declaration

Date: *[insert date (as day, month and year)]*

Contract Name and No.: *[insert name and number of Contract]*

To: *[insert complete name of Procuring Entity]*

We, the undersigned, declare that:

We understand that, according to your conditions, the Contract must be supported by a Performance Security Declaration as a guarantee to ensure fulfillment of our all performance obligations under the Contract *[insert name of subject matter of procurement]*.

We accept that we will automatically be suspended from being eligible for Proposal Loading in any contract with you for the period of time of *[Procuring Entity to indicate here the period of time for which the Procuring Entity will declare a Consultants ineligible to be awarded a Contract if the performance Security Declaration is to be executed]* starting on the date that we receive a notification from you, the *[Procuring Entity]* that our Performance Security Declaration is executed, if we are in breach of any of our performance obligation under the conditions of the Contract,

We understand this Performance Security Declaration shall expire after 60 days of completion of our all obligations under the Contract including warranty/ Guarantee, operation, maintenance, etc. in accordance with the conditions of the Contract.

Signed: _____

[insert signature of person whose name and capacity are shown]

In the capacity of: _____

[insert legal capacity of person signing the Performance Security Declaration]

Name: _____

[insert complete name of person signing the Performance Security Declaration]

Duly authorized to sign the Performance Security Declaration for and on behalf of:

[insert complete name of Consultant's Organisation]

Dated on ___ day of __, ____

[insert date of signing]

Corporate Seal _____