National Highways & Infrastructure Development Corporation Limited

BUILDING INFRASTRUCTURE - BUILDING THE NATION

**Ministry of Road, Transport & Highways,**
**(Govt. of India)**

**[National Competitive Bidding]**

# REQUEST FOR PROPOSAL

**For**

# "Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti

**January, 2023**

**National Highways & Infrastructure Development Corporation Ltd**
3rd floor, PTI Building, 4-Parliament Street,
New Delhi – 110001

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**National Highways & Infrastructure Development Corporation Ltd.**

**Ministry of Road, Transport and Highways,**
**Government of India**

**NHIDCL/MMLP/Tripura/2022** **Date: 10.01.2023**

## NOTICE INVITING TENDER (NIT)

**Sub: "Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti".**

1. NHIDCL has been assigned the work of "**Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti**.

2. Proposals are hereby invited from eligible Consultants for **Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti.** The Letter of Invitation (LOI) and Terms of Reference (ToR) including Request for Proposal (RFP) is available online on e-tender portal of https://eprocure.gov.in.The document can also be downloaded from NHIDCL website (www.nhidcl.com). Cost of the Document in the form of a Non-refundable document fee as mentioned in datasheet is to be deposited online (RTGS/NEFT/Other online mode) to the NHIDCL's Bank account as specified in Datasheet. A copy of payment receipt (RTGS/NEFT/Other online mode) must be submitted.

3. Bid must be submitted online at e-tender portal of NHIDCL https://eprocure.gov.in on or before the bid due date.

4. The following schedule is to be followed for this assignment:

| Sl. No. | Description | Date & Time |
|---|---|---|
| 1 | Invitation of RFP (NIT) | 10.01.2023 |
| 2 | Last date of receiving queries | 17.01.2023 |
| 3 | Pre-bid meeting at venue | 17.01.2023 at 1500 Hrs |
| 4 | Authority response to queries latest by | 24.01.2023 |
| 5 | Bid Due Date | 01.02.2023 at 1500 Hrs |
| 6 | Opening of Technical BIDs at venue | 02.02.2023 at 1500 Hrs |
| 7 | Declaration eligible / qualified bidders | To be intimated later |
| 8 | Opening of Financial BID | To be intimated later |
| 9 | Letter of Award (LOA) | To be intimated later |
| 10 | Validity of BID | 120 days from bid due date |
| 11 | Signing of Agreement | Within 15 days of issuance of LOA |

5. As part of the Standard Operating Procedure for adoption of Integrity Pact, **Sh. Subhash Chandra, IAS (Retd.)** has been appointed as Independent External Monitor (IEM) in NHIDCL, as per approval of the Central Vigilance Commission and Ministry of Road Transport & Highways, Govt. of India.

6. The contact details of Sh. Subhash Chandra, IAS (Retd.), IEM, NHIDCL, are as under:

B-9, Tower-10, New Moti Bagh Complex, New Delhi-110021

Email-id: subhash59@hotmail.com
Tel: +91-9717790920

***"IEM TO BE CONTACTED ONLY IN CASE OF ANY VIOLATION OF INTEGRITY PACT"***

**(Pankaj Kumar Sharma)**
**Dy. General Manager (Technical)**
**National Highways & Infrastructure**
**Development Corporation Ltd.**
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**Contact No. 011-23461617**
**Email: rajendrasingh.y@nhidcl.com , gm.infra@nhidcl.com**

## Letter of Invitation (LOI)

**NHIDCL/MMLP/Tripura/2022** **Dated: 10.01.2023**

Dear Sir,

**Sub: Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti.**

### 1. Introduction

**1.1** NHIDCL has been has been entrusted with the assignment of **Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti.** NHIDCL now invites proposal from Technical consultants for carrying out detailed project report as per details given in Annexure-1.

**1.2** A brief description of the assignment and its objectives are given in the Appendix-I, "***Terms of Reference***".

**1.3** NHIDCL invites Proposals (the "Proposals") through e-tender (on-line bid submission) for selection of Technical Consultant (the "Consultant") who shall prepare inception report and DPR. The consultant should have expertise in carrying out the similar kind of job. Consultants are here by invited to submit proposal in the manner as prescribed in the RFP document. The most preferred bidder (H-1) would be determined on the basis of Quality and Cost as mentioned in the RFP. A Consultant shall submit "proof of eligibility (Part 1)" and "Technical Proposal (Part II)". Financial proposals are only to be submitted online and no hard copy of the financial proposal should be submitted.

**1.4** The Consultants may apply either as a sole firm or forming Joint Venture with other consultants. In case of Joint Venture, ***maximum 3 (three) members will be permitted to form a JV which includes One Lead + Two JV partners OR One Lead + One JV partner + One Associate OR One Lead + Two Associates at the discretion of the prospective bidders***. Formulation of more than one JV/association with different partners for the same work is not allowed and all such proposal involving the firms shall be treated as non-responsive. If the consultant submits bids as sole applicant and also in JV/Association with another consultant, both bids shall be summarily rejected. No consultant shall submit more than one bid.

**1.5** To obtain first hand information on the assignment and on the local conditions, the consultants are encouraged to pay a visit to the client, local authorities like State government, other stakeholders and the proposed sites before submitting a proposal and attend a pre-proposal conference. They must fully inform themselves of local and site conditions and take them into account in preparing the proposal.

**1.6** Financial Proposals will be opened only for the firms found to be eligible and scoring qualifying marks in accordance with Para 5 hereof. The consultancy services will be awarded to the highest ranking consultant on the basis of Quality and Cost.

**1.7** Please note that (i) costs of preparing the proposal and of negotiating the contract, including visits to the Client, etc., are not reimbursable as a direct cost of the assignment; and (ii) Client is not bound to accept any of the proposals submitted and reserve the right to reject any or all proposals without assigning any reasons.

**1.8** The proposals must be properly signed as detailed below:

1.8.1 i. by the proprietor in case of a proprietary firm

ii. by the partner holding the Power of Attorney in case of a firm in partnership (A certified copy of the Power of Attorney on a stamp paper of Rs. 100 and duly notarized shall accompany the Proposal).

iii. by a duly authorized person holding the Power of Attorney in case of a Limited Company or a corporation (A certified copy of the Power of Attorney on a stamp paper of Rs. 100 and duly notarized shall accompany the proposal).

iv. by the authorized representative in case of Joint Venture.

1.8.2 In case a Joint Venture/Association of firms, the proposal shall be accompanied by a certified copy of legally binding Memorandum of Understanding (MOU) on a stamp paper of Rs.100, signed by all firms to the joint venture confirming the following therein:

i. Date and place of signing

ii. Purpose of Joint Venture/Association (must include the details of contract works for which the joint venture has been invited to bid)

iii. A clear and definite description of the proposed administrative arrangements for the management and execution of the assignment. Name of Lead Firm and other partner of JV should be clearly defined in the MOU

iv. Delineation of duties/ responsibilities and scope of work to be undertaken by each firm along with resources committed by each partner of the JV/Association for the proposed services

v. An undertaking that the JV firms are jointly and severally liable to the Employer for the performance of the services

vi. The authorized representative of the joint venture/Association shall give a Letter of Association, MOU as in i) to vi above except v, letter of Authorization, copies of GPA/SPA for the person signing the documents and a certificate of incorporation.

1.8.3 In case of Joint venture, one of the firms which preferably have relatively higher experience will act as the lead firm representing the Joint Venture. The duties, responsibilities and powers of such lead firm shall be specifically included in the MOU /agreement. It is expected that the lead partner would be authorized to incur liabilities and to receive instructions and payments for and on behalf of the Joint Venture. Payment to be made to the JV can also be made to the account of

the JV. For a JV to be eligible for bidding, the experience of lead partner and other partner should be as indicated in data sheet.

1.8.4 Deleted.

1.8.5 Only Indian firms are allowed to participate in the bid and no International Bidder is eligible as individually or as a member of a Joint Venture or as an associate. (Firms have to submit ownership details with documents in proof of the firm and also submit the details of share holders with ownership and documents in proof if any)

**1.9** Pre-proposal conference shall be held through VC on the date, time and venue given in Data Sheet.

**1.10** The Applicant, by submitting its Application pursuant to this RFP, shall be deemed to have acknowledged that without prejudice to the NHIDCL any other right or remedy hereunder or in law or otherwise, the Applicant shall be debarred from participating in the future projects of the NHIDCL in the following situations:

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

(b) In the case of a Selected Applicant, if the Applicant fails to sign the Agreement.

**1.11** No Consultancy firm will be awarded more than 03 (three) projects of Consultancy services as DPR Consultant in NHIDCL. If any consultancy firm either as a sole bidder or as JV partner/Associate has already been awarded or ongoing 03 consultancy projects as DPR Consultant in NHIDCL, then that consultancy firm will not be eligible for bidding for this work. Consultancy firms who are H1 in any of the projects of DPR Consultant under NHIDCL will be considered as awarded projects. Consultancy firms must submit an undertaking w.r.t. the above details in the specified format as per Appendix-IX.

## 2. Documents

**2.1** To enable you to prepare a proposal, please find and use the attached documents listed in the Data Sheet.

**2.2** Consultants requiring a clarification of the documents must notify the Client, in writing, by the time & date mentioned in NIT. Any request for clarification in writing or by telefax/e-mail must be sent to the Client's address indicated in the Data Sheet. The Client will upload replies to pre-bid queries on its website.

**2.3** At any time before the submission of proposals, the Client may, for any reason, whether at its own initiative or in response to a clarification requested by a Consulting firm, modify the Documents by amendment or corrigendum. The amendment will be uploaded on NHIDCL website. The Client may at its discretion extend the deadline for the submission of proposals and the same shall also be uploaded on NHIDCL website.

## 3. Preparation of Proposal

The proposal must be prepared in three parts viz.

Part 1: Proof of eligibility

Part 2: Technical Proposal

Part 3: Financial Proposal

### 3.1 Document in support of proof of eligibility

3.1.1 The minimum essential requirement in respect of eligibility has been indicated in the Data Sheet. The proposal found deficient in any respect of these requirements will not be considered for further evaluation. The following documents must be furnished in support of proof of eligibility as per Formats given in Appendix-II:

i. **Forwarding letter for Proof of Eligibility in the Form-E1.**

ii. **Firm's relevant experience and performance for the last 7 years:** Project sheets in support of relevant experience as per Form-E2/T3 supported by the experience certificates from clients / government organizations in support of experience as specified in data sheet for the project size, design and functional requirements preferably in projects of similar nature as that of proposed project shall be submitted. If the experience certificate from clients is in any other language than English, then English translation of experience certificate by authorized translator shall be submitted along with original certificates. Scope of services rendered by the firm should be clearly indicated in the certificate obtained from the client. The information given in Form E2/T3 shall also be considered as part of Technical Proposal and shall be evaluated accordingly. The Consultants are therefore advised to see carefully the evaluation criteria for Technical Proposal and submit the Project Sheets accordingly.

iii. **Firm's turnover for the last 3 years:** A tabular statement as in Form E3 showing the turnover of the applicant firm(s) for the last three years beginning with the last financial year certified by the Chartered Account (clearly mentioning UDIN number) along with certified copies of the audit reports shall be submitted in support of the turnover.

iv. **Document fee:** The fee for the document (Non-refundable) is to be deposited online (RTGS/NEFT/Other online mode) to the NHIDCL's Bank account as specified in Datasheet. A copy of payment receipt (RTGS/NEFT/Other online mode) must be submitted.

v. Deleted

vi. Power of Attorney on a stamp paper of Rs.100 and duly notarized authorizing to submit the proposal.

vii. In case of Joint Venture/ Association of firms, the proposal shall be

accompanied by a certified copy of legally binding Memorandum of Understanding (MOU) on a stamp paper of Rs.100, signed by all firms to the joint venture/ Association as detailed at para 1.8.2 above.

3.1.2 The minimum essential requirement in respect of eligibility has been indicated in the data sheet, the proposal found deficient in any respect of these requirements will not be considered for further evaluation.

**3.2 Technical Proposal**

3.2.1 It is expected to examine all terms and instructions included in the Documents. Failure to provide all requested information will be at your own risk and may result in rejection of your proposal.

3.2.2 During preparation of the technical proposal, particular attention must be given to the following:

Total assignment period is as indicated in the enclosed TOR. ***A manning schedule in respect of requirement of key personnel is also furnished in the TOR which shall be the basis of the financial proposal***. You shall make your own assessment of support personnel both technical and administrative to undertake the assignment. Additional support and administrative staff need to be provided for timely completion of the project within the total estimated cost. ***It is stressed that the time period for the assignment indicated in the TOR should be strictly adhered to.***

3.2.3 The technical proposal shall be submitted strictly in the Formats given in Appendix- III and shall comprise of following documents:

i. Forwarding letter for Technical proposal duly signed by the authorized person on behalf of the bidder, as in Form-T-1

ii. Details of projects for which Technical and Financial Proposals have been submitted by a Consultant with a particular Team as in Form-T- 2

iii. Firm's references - Relevant Services carried out in the last seven years as per Form- E2/T-3. This information submitted as part of Proof of Eligibility shall be evaluated and need not be submitted again as a part of the Technical proposal.

iv. Site Appreciation: limited to four A4 size pages in 1.5 space and 12 font including photographs, if any (Form-T-4).

v. The composition of the proposed Team and Task Assignment to individual personnel: Maximum three pages (Form-T-5).

vi. Proposed methodology for the execution of the services illustrated with bar charts of activities, including any change proposed in the methodology of services indicated in the TOR, and procedure for quality assurance: Maximum 4 pages (Form-T-6)

vii. The proposal should clearly identify and mention the details of Material Testing lab facilities to be used by the Consultants for the project (Form- T-7). In this connection, the proposals of the Consultants to use in-house lab

facilities up to a distance of maximum 400 km from the project site being feasible would be accepted. For all other cases suitable nearby material Testing Laboratory shall be proposed before Contract Agreement is executed.

viii. The proposal shall indicate as to whether the firm is having the facilities for carrying out the following activities or these are proposed to be outsourced to specialized agencies in the Form- T-8.

(a) Field Surveys and Investigations

(b) DPR works related to road / highways & rail design

(c) DPR work related to Multimodal Logistics Parks

In case the consultant envisages outsourcing any or all of the above services to the expert agencies, the details of the same indicating the arrangement made with the agencies need to be furnished. These agencies would however, be subject to approval of the client to ensure quality input by such agencies before award of the work. For out- sourced services, proposed firms/consultants should have such experience on similar projects

ix. CVs of Key Personnel in Form–T-10

3.2.4 **CVs of Key Persons**:

i. The CVs of the Nine key personnel as mentioned in para 3.2.3 (ix) above in the format as per Form T-10 is to be furnished. It may please be ensured that the format is strictly followed and the information furnished therein is true and correct. The CV must indicate the work in hand and the duration till which the person will be required to be engaged in that assignment. The Firm shall ensure that details furnished in the CV by the personnel are correct. If any information is found incorrect, at any stage, action including termination and debarment from future NHIDCL projects for a minimum period of 2 years may be taken by NHIDCL on the personnel and the Firm.

ii. The minimum requirements of Qualification and Experience of all key personnel are listed in Enclosure-II of TOR. CV of a person who does not meet the minimum experience requirement as given at enclosure-II of TOR shall be evaluated and the marks obtained shall be taken into consideration during evaluation of Technical Proposal (except Team leader). However if a firm with such key personnel is declared the "most preferred bidder" for a particular package, such key personnel should be replaced before signing of contract with a person meeting requirements of Qualification and Experience as given at enclosure-II of TOR and whose CV secures 75 % marks and above. If a proposed key personnel does not possess the minimum (essential) educational qualification as given at enclosure-II of TOR, Zero marks shall be assigned to such CV and such CV shall not be evaluated further. The CV of the proposed Team Leader should score at least 75 % marks otherwise the entire proposal shall be considered to have failed in the evaluation of Technical Proposals and shall not be considered for opening of Financial Proposals.

iii. Key Personnel is to include the following:-

a. Team Leader
b. Logistic Park Planner
c. Warehousing Expert
d. Freight Transport Planner
e. Financial cum Market Analyst
f. Environment cum Social Expert
g. Rail Engineer
h. Road Engineer
i. Hydrographic Expert

The key personnel having full man-months as per the proposed work programme should be available from the beginning of the project and key personnel having intermittent man-months should be available within the assignment period, as and when required. **If same CV is submitted by two or more firms, zero marks shall be given for such CV to all the firms.**

The Consultants shall establish a site office at Udaipur Tripura at the time preparation of DPR manned by senior personnel during the course of consultancy services for coordination with NHIDCL and the Consultant must ensure that at least two key personnel should be present at site office during entire period of services for continuous interaction with NHIDCL or its appointed engineer.

iv. The availability of key personnel must be ensured for the duration of project as per proposed work programme. If a firm claims that a key personnel proposed by them is a permanent employee of the firm (the personnel should have worked in the firm continuously for a period of at least 1 year), a certificate to the effect be furnished by the firm.

v. An undertaking from the key personnel must be furnished that he/she will be available for entire duration of the project assignment and will not engage himself/herself in any other assignment during the period of his/her assignment on the project. After the award of work, in case of non-availability of key personnel in spite of his/her declaration, he/she shall be debarred for a period of two years for all projects of NHIDCL.

vi. Age limit for supporting staff to be deployed on project is 65 years as on the date of bid submission. The proof of age and qualification of the key personnel must be furnished in the technical proposal.

vii. A good working knowledge of English Language is essential for key professional staff on this assignment. Study reports must be in English Language.

viii. Photo, contact address and phone/mobile number of key personnel should be furnished in the CV.

ix. Availability of few key personnel engaged for preparation of Detailed Project Report for the envisaged project may be ensured during first 3 to 4 months after start of the civil work at site during the period of survey and

review of Feasibility Study and DPR by the Supervision consultant/Authority Engineer. For this purpose, payment shall be made as per actual site deployment of the key personnel at the man month rates quoted by the firm in their financial proposal.

x. It may please be noted that in case the requirement of the 'Experience' of the firm/consortium as mentioned in the "Proof of Eligibility' is met by any foreign company (if allowed), their real involvement for the intended project shall be mandatory. This can be achieved either by including certain man-months input of key experts belonging to the parent foreign company, or by submitting at least the draft inception report and draft DPR duly reviewed by the parent firm and their paying visit to the site and interacting with NHIDCL. In case of key personnel proposed by the foreign company, they should be on its pay roll for at least last six months (from the date of submission).

xi. In case a firm is proposing key personnel from educational/research institutions, a '**No Objection Certificate**' from the concerned institution should be enclosed with the CV of the proposed key personnel committing his services for the instant project.

xii. Original Curriculum Vitae (CV) and photocopies of certificates shall be recently signed in blue ink by the proposed key professional staff on each page and also initialed by an authorized official of the Firm and each page of the CV must be signed. The key information shall be as per the format. Photocopy of the CVs will not be accepted. Digital Signature, countersigned by the authorized signatory is also acceptable. Unsigned copies of CVs shall be rejected.

### 3.2.5 Sub-professional staff for engineering and civil works

The consultant may engage a resourceful and experienced team of professionals/firm for planning, design and DPR preparation related to all aspects of Multimodal Logistics Parks. In case in-house expertise exists, the consultant must furnish details of at least two projects in the past for multimodal logistics park projects or projects of similar nature. When in-house capability is not available, the consultant will need to employ these professionals/firm with prior approval of NHIDCL

### 3.2.6 Sub-consultants for highway/roads, rail and Inland Water Transport (IWT) Terminals

The consultant may engage following sub-consultants as part of the project team:

1. Renowned firm having experience in DPR preparation of National Highway Projects with at least one project of DPR preparation of 4-lane bridge/viaduct design having 200 m length.
2. Renowned firm having DPR preparation experience for rail track and railway bridge design.
3. Renowned firm having DPR preparation experience for navigation channel for shipping or development of Ports or development of IWT Terminals.

In case in-house expertise exists, the consultant must furnish details of at least two projects in the past: (i) National Highway DPR preparation and (ii) Rail track or rail bridge design DPR Preparation, or projects of similar nature (iii) navigation channel for shipping or development of Ports or development of IWT Terminals or projects of similar nature. When in-house capability is not available, the consultant will need to employ sub-consultants with prior approval of NHIDCL.

3.2.7 The technical proposal must not include any financial information.

### 3.3 Financial Proposal

3.3.1 The Financial proposal should include the costs associated with the assignment. These shall normally cover: remuneration for staff (foreign and local, in the field, office etc.), accommodation, transportation, equipment, printing of documents, surveys, geotechnical investigations etc. This cost should be broken down into foreign and local costs. Your financial proposal should be prepared strictly using, the formats attached in **Appendix – IV**. Your financial proposal should clearly indicate the amount asked for by you without any assumptions of conditions attached to such amounts. Conditional offer or the proposal not furnished in the format attached in Appendix-IV shall be considered non- responsive and is liable to be rejected.

3.3.2 The financial proposal shall take into account all types of the tax liabilities and cost of insurance specified in the Data Sheet.

**3.3.3 Costs shall be expressed in Indian Rupees.**

The payments shall be made in Indian Rupees by the NHIDCL and the Consultant themselves would be required to obtain foreign currency to the extent quoted and accepted by NHIDCL. Rate for foreign exchange for payment shall be at the rate established by RBI applicable at the time of making each payment installment on items involving actual transaction in foreign currency. No compensation done to fluctuation of currency exchange rate shall be made.

3.3.4 Consultants are required to charge only rental of equipments / software (s) use so as to economize in their financial bid.

## 4. Submission of Proposals

**4.1** The Applicants shall submit the proposal (Proof of Eligibility and Technical Proposal) in hard bound form with all pages numbered serially and by giving and index of submissions. Applications submitted in other forms like spiral bound form; loose form etc shall be rejected. Copies of Applications shall not be submitted and considered. Financial proposal is to be submitted separately. Financial proposals are only to be submitted online and no hard copy of the financial proposal should be submitted. The most preferred bidder (H-1) for each project would be determined on the basis of Quality and Cost as mentioned in the RFP.

The document listed in para 3.1.1 (iv), (vi), (vii) shall be submitted in original by the H-1 bidder to the Authority.

**4.2** The proposal must be prepared in indelible ink and must be signed by the authorized representative of the consultants. The letter of authorization must be confirmed by a written power of attorney accompanying the proposals. All pages of the Proof of Eligibility and Technical Proposal must be initialed by the person or persons signing the proposal.

**4.3** The proposal must contain no interlineations or overwriting except as necessary to correct errors made by the Consultants themselves, in which cases such corrections must be initialed by the person or persons signing the proposal.

**4.4** Your proposal must be valid for the number of days stated in the Data Sheet from the closing date of submission of proposal.

## 5. Proposal Evaluation

### 5.1 Stage I- Proof of Eligibility

The proposals would be evaluated by a Committee constituted by NHIDCL. A three stage procedure will be adopted in evaluating the proposal. In the first stage- Proof of Eligibility, it will be examined as to whether:

i) The proposal is accompanied by Document fee

ii) The Proposal is accompanied by Bid Security of required value and of validity equal or more than the minimum required validity

iii) The firms(s) have required experience

iv) The firms(s) have required turnover

v) The documents are properly signed by the authorized signatories and whether the proposal contains proper POA as mentioned at para 1.8.1 above

vi) The proposals have been received on or before the dead line of submission.

vii) In case a Joint Venture/Association of firms, the proposal shall be accompanied by a certified copy of legally binding Memorandum of Understanding (MOU) on a stamp paper of Rs.100, signed by all firms to the joint venture/Association as detailed at para 1.8.2 above.

In case answers to any of the above items is 'No' the bid shall be declared as non- responsive and shall not be evaluated further.

A Consultant satisfying the minimum Eligibility Criteria as mentioned in the Data sheet and who had submitted the above mentioned documents shall be declared "pass" in Proof of Eligibility and the Technical Proposals of only those consultants shall be opened and evaluated further.

## 5.2 Stage II - Technical evaluation

In the second stage the Technical proposal shall be evaluated as per the detailed evaluation criteria given in Data Sheet.

A proposal securing 75 points shall be declared pass in the evaluation

Technical Proposal. **The technical proposal should score at least 75 points out of 100 to be considered for financial evaluation. The CV of the proposed Team Leader should score at least 75 % marks otherwise the entire proposal shall be considered to have failed in the evaluation of Technical Proposals** and shall not be considered for opening of Financial Proposals.

## 5.3 Stage III - Evaluation of Financial Proposal

5.3.1 In case, only one firm is eligible for opening of Financial Proposals, the Financial Proposal shall not be opened, the bids shall be cancelled and NHIDCL shall invite fresh bids for this site. For financial evaluation, total cost of financial proposal excluding Goods & Service Tax shall be considered. Goods & Service Tax shall be payable extra.

5.3.2 The evaluation committee will determine whether the financial proposals are complete (i.e. whether they have included cost of all items of the corresponding proposals; if not, then their cost will be considered as NIL but the consultant shall however be required to carry out such obligations without any compensation. In case, if client feels that the work cannot be carried out within overall cost of financial proposal, the proposal can be rejected. The client shall correct any computational errors and correct prices in various currencies to the single currency specified in Data Sheet. The evaluation shall exclude those taxes, duties, fees, levies and other charges imposed under the applicable law & applied to foreign components/ resident consultants.

5.3.3 For a site, the procedure as mentioned at Clauses 5.3.4, 5.4 and, 5.5 as mentioned below shall be followed for determining the "most preferred bidder (H-1 bidder)" for this site.

5.3.4 The lowest financial proposal (FM) will be given a financial score (SF) of 100 points. The financial scores of other proposals will be computed as follows:

SF = 100xFM/F

(SF = Financial Score, FM= Amount of lowest bid, F= Amount of financial proposal converted in the common currency)

**5.4 Combined evaluation of Technical and Financial Proposals.**

Proposals will finally be ranked according to their combined technical (ST) and Financial (SF) scores using the weights indicated in the Data Sheet:

S= STxT + SFxf

Where,

S= Combined Score,

ST= Technical Score out of 100

SF= Financial Score out of 100

T and f are values of weightage for technical and financial proposals respectively as given in the Data Sheet.

**5.5 Most Preferred Bidder (H-1).**

For a particular package, a Consultant with a "particular Team" having the maximum Combined score (S) shall be declared as the **most preferred bidder (H-1).**

**5.6** Deleted.

## 6. Performance Security

**6.1** The consultant will furnish within 15 days of the issue of Letter of Acceptance (LOA), an unconditional Bank Guarantee equivalent to 5**% of the total contract value** from a nationalized bank IDBI or ICICI/ICICI Bank/ Foreign Bank/EXIM Bank/Any Scheduled Commercial Bank approved by RBI having a net worth of not less than Rs. 1000 Crores as per latest Annual Report pof the Bank amongst the list of Banks avaialbe at NHIDCL website (HTTPs://nhidcl.com) only ~~**Public Sector Banks or Scheduled Private Banks having the Net Worth of Rs 1,000/- crores or more as per the latest annual report of the bank, in favour of the Authority. The list of such banks is mentioned as below.**~~ **The Authority reserves the right to add or remove any of names bank on which BG shall be accepted based on advisories from the Govt./RBI. The BGs issued by 'Foreign Banks' and Banks not mentioned in the given list shall not be accepted.** In case of JV, the BG shall be furnished on behalf of the JV or by the lead member of the JVs for an amount equivalent to 3% of the total contract value towards Performance Security valid for a period of three years beyond the date of completion of services, or end of civil works contract, whichever earlier. **The Bank Guarantee will be released by NHIDCL upon expiry of 3 years beyond the date of completion of services, or end of civil works contract, whichever earlier, provided rectification of errors if any, found during implementation of the contract for civil work and satisfactory report by NHIDCL in this regard is issued. However, if contract is foreclosed / terminated by NHIDCL at Inception Stage, with no fault of Consultant, Performance Security shall be released within three months from date of foreclosure / termination.**

**6.2** Deleted.

**6.3** In the event the Consultant fails to provide the security within 15 days of date of LOA, it may seek extension of time for a period of 15 (Fifteen) days on payment of damages for such extended period in a sum of calculated at the rate of 0.05% (Zero Point Zero Five Percent) of the Bid price for each day until the performance security is provided. For the avoidance of doubt the agreement shall be deemed to be terminated on expiry of additional 15 days time period.

**6.4** Notwithstanding anything to the contrary contained in this Agreement, the Parties agree that in the event of failure of the Consultant to provide the Performance Security in accordance with the provisions of Clause 6.1 and 6.2 within the time specified therein or such extended period as may be provided by the Authority, in accordance with the provisions of Clause 6.3, all rights, privileges, claims and entitlements of the Consultant under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased with the concurrence of the Consultant and the LoA shall be deemed to have been withdrawn by mutual agreement of the Parties. Authority may take action to debar such firms for future projects for a period of 1-2 year.

**6.5** A Bidder is required to submit, along with its BID, a **BID Security of Rs. 2,00,000/- (Rupees Two Lakh Only)** (the "BID Security"), refundable not later than **180 (One hundred & Eighty) days** from the BID Due Date, except in the case of the Selected Bidder whose BID Security shall be retained till it has provided a Performance Security and Additional Performance Security (if any).

## 7. Penalty

The consultant will indemnify for any direct loss or damage that accrue due to deficiency in services in carrying out Detailed Project Report. Penalty shall be imposed on the consultants for poor performance/ deficiency in service as expected from the consultant and as stated in General Conditions of Contract.

## 8. Award of Contract

The Client shall issue letter of award to selected Consultant and ask the Consultant to provide Performance Security as in Para 6 above. If the selected Consultant fail to provide performance security within the prescribed time or the Consultant fail to sign the Contract Agreement within prescribed time, the Client may invite the 2nd highest ranking bidder Consultant and follow the procedure outlined in Para 8 and 9 of this Letter of Invitation.

## 9. Signing of Contract Agreement

After having received the performance security and verified it, the Client shall invite the selected bidder for signing of Contract Agreement on a date and time convenient to both parties within 15 days of receipt of valid Performance Security.

10. The Client shall keep the bidders informed during the entire bidding process and shall host the following information on its website:

i) Notice Inviting Tender (NIT)
ii) Request For Proposal (RFP)
iii) Replies to pre-bid queries, if any
iv) Amendments / corrigendum to RFP
v) List of bidders who submitted the bids up to the deadline of submission
vi) List of bidders who did not pass the eligibility requirements, stating the broad deficiencies
vii) List of bidders who did not pass the Technical Evaluation stating the reasons.
viii) List of bidders along with the technical score, who qualified for opening the financial bid
ix) Final Score of qualified bidders
x) Name of the bidders who is awarded the Contract

11. It is the NHIDCL policy that the consultants observe the highest standard of ethics during the selection and execution of such contracts. In pursuance of this policy, the NHIDCL:

(a) Defines, for the purpose of this paragraph, the terms set forth below as follows:

(i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the selection process or in contract execution;

(ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a selection process or the execution of a contract;

(iii) "collusive practices" means a scheme or arrangement between two or more consultants with or without the knowledge of the Client, designed to establish prices at artificial, non-competitive levels;

(iv) "coercive practices" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract.

(b) will reject a proposal for award if it determines that the Consultant recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the contract in question;

(c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a contract; andll have the right to require that a provision be included requiring consultants to permit the Employer to inspect their accounts and records relating to the performance of the contract and to have them audited by authorized representatives of Employer."

**12. Confirmation**

We would appreciate you informing us by facsimile/e-mail whether or not you will submit a proposal.

Thanking you.

Yours sincerely,

**Encl. as above**

**(Pankaj Kumar Sharma)**
**Dy. General Manager**
**(Technical) National Highways &**
**Infrastructure Development**
**Corporation Ltd.**
**2nd Floor, PTI Building,**
**4- Parliament Street, New Delhi- 110001**
**Contact No. 011-2346161**
**Email:r ajendrasingh.y@nhidcl.com , gm.infa@nhidcl.com**

**ANNEX-1**

**Details of the stretch proposed for DPR preparation**

**Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti.**

| Sr. No. | Description of work | State | Site Location* |
|---|---|---|---|
| 1 | Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti. | Tripura | Udaipur |

* The above site location is tentative. The consultant shall carry out assessment as per ToR for various site options and select one site. For road, trunk infrastructure connectivity for the proposed MMLP site may be developed to nearby arterial road/s. Similarly, for rail and IWT connectivity may be proposed to existing railway lines and Inland waterway source respectively.

**ANNEX-II**

**Deleted.**

## DATA SHEET

I (References to corresponding paragraphs of LOI are mentioned alongside)

1. **The Name of the Assignment and description of project as mentioned in Annex-I** (Ref. Para 1.1)
   **Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti.**

2. **The name of the Client is :** NHIDCL

3. **Duration of the Project :** 06 months

4. **Date, Time and Venue of Pre-Proposal Conference through VC**

   **Date:** **17.01.2023**
   **Time:** 15:00
   **Venue:** 3rd floor, PTI Building, 4 Parliament Street,
   Sansad Marg Area, New Delhi, Delhi 110001.

5 **The Documents are:**

| | | |
|---|---|---|
| i. | Appendix-I: | Terms of Reference (TOR) |
| ii. | Appendix-II | Formats for Proof of Eligibility |
| iii. | Appendix-III: | Formats for Technical Proposal |
| iv. | Appendix-IV: | Formats for Financial Proposal |
| v. | Appendix-V: | Detailed Evaluation Criteria |
| vi. | Appendix –VI | Draft Contract Agreement |
| vii. | Appendix –VII | DPR Checklist |
| viii. | Appendix –VIIII | Sample Executive Summary |

(Ref. Para 2.1)

**6. Bid Security: Rs. 2.0 lacs**

7. **Tax and Insurance** (Ref. Para 3.3.2)

   (i). The Consultants and their personnel shall pay all taxes (including Goods & service tax), custom duties, fees, levies and other impositions levied under the laws prevailing seven days before the last date of submission of the bids. The effects of any increase / decrease of any type of taxes levied by the Government shall be borne by the Client / Consultant, as appropriate.

(ii). Limitations of the Consultant's Liability towards the Client shall be as per Clause 3.4 of Draft Contract Agreement.

(iii). The risk and coverage shall be as per Clause 3.5 of Draft Contract Agreement.

8. Deleted

9. **Document Fee:** The fee for the document amounting to **Rs. 5,900/- (Rupees Five Thousand Nine Hundred only)** (Rs. 5,000/- plus GST@18%) (Non-refundable ) is to be deposited online (RTGS/NEFT/Other online mode) to the NHIDCL's Bank account as mentioned below. A copy of payment receipt (RTGS/NEFT/Other online mode) must be submitted.

| Sl. No. | Particular | Details |
|---|---|---|
| 1 | Name of Beneficiary | National Highways &Infrastructure Development Corporation Limited |
| 2 | Beneficiary Bank Account No. | 90621010002610 |
| 3 | Beneficiary Bank Branch Name and Address | Syndicate Bank, Transport Bhawan, 1st Parliament Street, New Delhi110001 |
| 4 | Beneficiary Bank Branch IFSC | CNRB0019062 |

10. The date, time and Address of proposal submission are

**Date : 01**.02.2023

**Time :** 1500 Hrs

**Address :** General Manager (Technical)
3rd floor, PTI Building, 4 Parliament Street,
Sansad Marg Area, New Delhi, Delhi 110001

(Ref. Para 4.4)

11. Proposal Validity period (Number of days): 120 days (Ref. Para 4.5)

12. Evaluation criteria: (Ref. Para 3 & 5)

12.1 First stage evaluation – eligibility requirement. (Ref. Para 3.1 & 5.1)

**Table-1: Minimum Eligibility Requirements**

| Clause | Qualification Criteria | Minimum Requirement |
|---|---|---|
| a) | Experience of preparation of Detailed Project Report/ Feasibility Assessment Report for setting up Integrated Multi Modal Logistics Hub (IMLH)/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs) with minimum size of 50 acres in the last 7 years. Ongoing DPR projects (atleast 90% completed) will also be considered.<br>The emphasis will be on relevance of the projects to the nature of assignment, cost, size and scope of work carried out by the consultant i.e. comparable size, complexity, technical specialty and key components of the projects. | Number of Projects:<br>(i) One work of Detailed Project Report<br>Or<br>(ii) Two works of Feasibility Assessment Report |
| b) | Experience of preparation of Detailed Project Report / Techno – Economic Feasibility study for development of navigation channel for shipping or development of Ports or development of IWT Terminals. | Number of Projects:<br>(i) One work of Detailed Project Report<br>Or<br>(ii) Two works of Feasibility Assessment Report |
| c) | Average Annual Turnover from consultancy services for last 3 financial years i.e. 2017-18, 2018-19, 2019-20. | INR 5 Crore |

**Note: In case IWT is included as part of DPR, no separate experience will be required.**

The firm needs to provide detailed experience certificates for all projects under category 'a' and 'b' detailing out (but not limited to) project timelines, current status of implementation, project cost, size of the project, capacity of the terminal, key elements of transportation infrastructure, driver amenities and commercial development as applicable from the engaging government agency/ client/ certified by statutory auditor. If the experience certificate from clients is in any other language than English, then English translation of experience certificate by authorized translator shall be submitted along with original certificates.

(i) The sole applicant shall fulfill all the requirements given in Table-1.

(ii) In case of JV, the Lead Partner should fulfill at least 75% of eligibility requirements of any two clauses (a) or (b) above and should fulfill at least 75% of eligibility requirement of clause (c), other partner shall fulfill at least 50% of eligibility requirements of any two clauses (a) or (b) above and should fulfill at least 50% of eligibility requirement of clause (c) and associate partner should fulfill at least 20% of eligibility requirement of clause (c). However, the JV should fulfill all eligibility requirements of clauses (a), (b) and (c) given in table above.

(iii) If the applicant firm has / have prepared the DPR/FS projects solely on its own, 100% weightage shall be given. If the applicant firm has prepared the DPR/FS projects as a lead partner in a JV, 75% weightage shall be given. If the applicant firm has prepared the DPR projects as the other partner (not lead partner) in a JV, 50% weightage shall be given. If the applicant firm has prepared the DPR/FS projects as an associate, 25% weightage shall be given.

(iv) The experience claim for private concessionaire/contractor shall be subject to the fact that the facility is operational and the experience certificate clearly mentioning the project details and scope of work is furnished by the consultant along with a certification from a statutory auditor for receipt of professional fee for the engagement.

**12.2 Second stage technical evaluation (Refer 5.2)**

The evaluation committee ("Evaluation Committee") appointed by the Client will carry out the technical evaluation of Proposals on the basis of the following evaluation criteria and points system. Each evaluated Proposal will be given a technical score (St) as detailed below. The maximum points/ marks to be given under each of the evaluation criteria are:

**Table-2: Technical evaluation maximum score**

| Sr. No. | Description | Points |
|---|---|---|
| 1 | Firm's relevant experience in last 7 years | 50 |
| 2 | Qualification and Relevant experience of the proposed key personnel | 50 |
| | **Total** | **100** |

Further break-up of each criteria has been detailed out below:

**A. Firm's relevant experience in last 7 years (50)**

| Sr. No. | Description | Points Obtained | Maximum Points |
|---|---|---|---|
| a) | The firm should have undertaken / completed similar projects as mentioned in clause (a) in Table 1 of preparation of Detailed Project Report/ Feasibility Assessment Report for setting up Integrated Multi Modal Logistics Hub (IMLH)/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs) with minimum size of 50 acres in the last 7 years. Ongoing DPR projects (at least 90% completed) will also be considered.<br>The emphasis will be on relevance of the projects to the nature of assignment, cost, size and scope of work carried out by the consultant i.e. comparable size, complexity, technical specialty and key components of the projects. | One work = 15 points<br><br>*For Each additional work – 2.5 points subject to maximum 5 points. | 20 |
| b) | Experience of preparation of Detailed Project Report / Techno – Economic Feasibility study for development of navigation channel for shipping or development of Ports or development of IWT Terminals. | One work = 10 points<br><br>*For Each additional work – 2.5 points subject to maximum 5 points. | 15 |
| c) | Average Annual Turnover from consultancy services for last 3 financial years i.e. 2019-20, 2020-21, 2021-22 | Firm's Average Turnover of last 3 years > =5 crore = 10 points<br><br>*For Each additional turnover of Rs 2 Cr annually – 2.5 points subject to maximum 5 points. | 15 |
| **Total** | | | **50** |

**Note:** In case feasibility study is a part of DPR services, the experience shall be counted in DPR only. In case IWT is included as part of DPR, the experience will be considered under (a) and (b) both.

**B. Qualification and relevant experience of the proposed key personnel (40)**

The weightage for various key staff is as under:

| Sr. No. | Key personnel | Points |
|---|---|---|
| 1 | Team Leader | 8 |
| 2 | Logistics Park Planner | 7 |
| 3 | Warehousing Expert | 5 |
| 4 | Freight Transport Planner | 5 |
| 5 | Financial cum Market Analyst | 5 |
| 6 | Environment cum Social Expert | 5 |
| 7 | Rail Engineer | 5 |
| 8 | Road Engineer | 5 |
| 9 | Hydrographic Expert | 5 |
| | **Total** | **50** |

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

| Sr. No. | Description | Maximum Points | Sub-Points |
|---|---|---|---|
| **1** | **General Qualification** | **25** | |
| 1.1 | Essential education qualification | | 20 |
| 1.2 | Desirable education qualification | | 5 |
| **2** | **Relevant experience and adequacy for the project** | **70** | |
| 2.1 | Total professional experience | | 15 |
| 2.2 | Experience in Highway/Bridge/Infrastructure/ Rail/ IWT Projects | | 25 |
| 2.3 | Experience in Similar Capacity | | 30 |
| **3** | **Employment with the Firm** | **5** | |
| 3.1 | Less than 1 Year | | 0 |
| 3.2 | 1 year | | 3 |
| 3.3 | Add 0.5 marks for each subsequent year subject to maximum of 2 marks | | 2 |

**12.3 Detailed evaluation criteria which is to be used for evaluation of technical bids is as indicated at Appendix-V.**
**The Consultant should carryout self-evaluation based on the evaluation criteria at Appendix-V. While submitting the self-evaluation along with bid, Consultant shall make references to the documents submitted in their proposal which have been relied upon in self-evaluation Result of technical**

**evaluation shall be made available on the website giving opportunity to the bidders to respond within 7 days in case they have any objection**

**12.4 Third stage – Evaluation of Financial proposal**

Financial Proposals of all Qualified Consultants in accordance with clause 5.2 and 5.3 of Letter of Invitation shall be opened.

The consultancy services will be awarded to the consultant scoring highest marks in combined evaluation of Technical and Financial proposals in accordance with clause 1.3 and 5.4 hereof.

The Factors are:

The weight given to Technical Proposal (T) = 0.70. The weight given to Financial Proposal (f) = 0.30

13. The common currency is "**Indian Rupee".** (Ref. Para 3.3.3)

**Consultants have to quote in Indian Rupees**

14. Commencement of Assignment (Date, Location): The Consultants shall commence the Services from the date of signing of contract agreement at locations as required for the project stretch stated in TOR. (Ref. Para 1.2 of LOI and 2.3 of GCC/SC)

**APPENDIX-I**

## TERMS OF REFERENCE (TOR)

**Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti.**

## Terms of Reference for Consultancy Services (TOR)

### 1. General

1.1 The NHIDCL has been entrusted with the assignment of **Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti.** NHIDCL now invites proposal from Technical consultants for carrying out detailed project report as per details given in Annexure- 1.

1.2 NHIDCL will be the employer and executing agency for the consultancy services and the standards of output required from the appointed consultants are of international level both in terms of quality and adherence to the agreed time schedule. The consultancy firm will solely be responsible for submission of quality work in stipulated period.

**1.3 Functionalities of Logistics Park**

**i. Freight aggregation and distribution**

Logistics parks act as hubs for freight movement enabling freight aggregation and distribution. Freight from production zones will be shipped to nearby logistics parks, where it will be aggregated and shipped to a logistics park near the consumption zone on a larger sized vehicle. Freight arriving at the destination logistics park will be disaggregated and distributed to the consumption zones.

**ii. Multimodal freight transportation**

Logistics parks with road land, Inland water connectivity and rail connectivity enable multimodal freight transportation. This aids freight transportation on long haul (between hubs) to shift from road to rail and waterways (wherever possible), thereby reducing the freight cost.

**iii. Storage and warehousing**

Logistics parks provide modern mechanized warehousing space, satisfying the special requirements of different commodity groups. With higher proportion of mechanized material handling, warehousing in logistics parks will reduce storing and handling losses.

**iv. Value added services**

Logistics parks also provide value added services such as packaging and labelling, inventory management, quality checking, customs clearance with bonded storage yards, kitting, sequencing, tracking, tracing etc. at logistics parks. Further set of services include management of inbound and outbound activities on behalf of the tenant just-in-time and just-in-sequence delivery to local customers, direct delivery to international customers from the facility and reverse logistics.

## 2. Objective

2.1 The main objective of the consultancy assignment is as follows:

Client intends to appoint a consultant, whose objective shall be: *'Preparation of* Detailed Project Report for Development of Multimodal Logistics Park at Udaipur in the State of Tripura and External Trunk Connectivity Infrastructure to the Multimodal Logistics Park site at Udaipur. The outputs of the study should be directly usable for bidding out development of a Multi-Modal Logistics Park. Necessary detailing of master plans, engineering design and drawings for MMLP and detailed engineering design and drawings for the external trunk connectivity infrastructure to MMLP comprising road and rail, needs to be carried out by consultant. Necessary stakeholder alignment and statutory clearances for the same will also need to be carried out by the consultant. Post completion of the assignment, the consultant will have to provide assistance to the client during the appointment process for the PPP concessionaire to address queries on the Feasibility Study Report/process/ business model.

2.2 The viability of the project shall be established taking into account the requirements with regard to rehabilitation, upgrading and improvement based on highway design, pavement design, provision of service roads wherever necessary, type of intersections, 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 within the given time frame.

2.3 The objective of the study for preparation of DPR of IWT terminal at Udaipur is to construct Inland Water Transport terminal to enable round the year berthing of the vessels, manual and mechanical handling of cargo. The possible sites available for IWT terminal and to select the best alternative site along with feasibility study are to be explored at the stage of preparation of Inception report. The terminal will also have the facilities for open and covered storage of goods, internal roads, utilities including electricity, water supply, drainage, fire-fighting, landscaping and horticulture. The envisaged IWT terminal shall be integrated with the proposed MMLP at Udaipur.

2.4 The consultant should, along with Inception Report, clearly bring out through financial analysis the preferred mode of implementation on which the Civil Works for the stretches are to be taken up. The consultant should also give cost estimates along with feasibility report/ detailed Project Report.

2.5 If at inception stage or feasibility stage, employer desires to terminate the contract, the contract will be terminated after payment up to that stage.

## 3. SCOPE OF SERVICES

3.1 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 Consultants shall also prepare bid documents for DPR assignment including drawings.

3.2 The consultant shall prepare separate documents for PPP, BOT as well as HAM contracts at DPR stage. The studies for financing options like PPP, BOT, Annuity, HAM will be undertaken in DPR stage.

3.3 Consultant shall be responsible for sharing the findings from the preparation stages during the bid process. During the bid process for a project, the consultant shall support the authority in responding to all technical queries, and shall ensure participation of senior team members of the consultant during all interaction with potential bidders including pre- bid conference, meetings, site visits etc. In addition, the consultant shall also support preparation of detailed responses to the written queries raised by the bidders.

### 3.4 SCOPE OF WORK

**3.4.1** The scope of work specified below is not exhaustive. The Consultant shall be required to carry out additional works, if any, to meet the objectives stated above, it must be noted that no other Consultant will be appointed, till appointing the Developer for the Project. The consultant should get all the requisite approvals in the name of the Client/SPV from the Indian Railways/ MoRTH/ State governments and/or any other stakeholder for the project. The client will provide all assistance to the consultants in getting these approvals however the responsibility of getting these approvals rests with the consultant.

**3.4.2** General scope of the work for this assignment includes but not limited to the following major tasks:

- Understanding key needs for providing a hub for freight aggregation and disaggregation across multiple modes of transport along with storage space and value-added services, all within a single facility. Understand and benchmark best practices internationally and across India. Location suitability analysis based on-site and other primary surveys about the project sites and the project influence area. Review of all available reports, relevant reports & published information.

- Infrastructure gap assessment and planning/design for road, rail, ports, air and inland waterways connectivity, as applicable.

- Preparation of a Detailed Project Report (DPR) for Multimodal Logistics Park at Udaipur and external trunk connectivity infrastructure (road and rail) based on infrastructure gap assessment, including activities related to land acquisition and getting statutory clearances like Environmental clearances, forest clearance etc. for providing the external trunk connectivity infrastructure to the nearest National Highway and Rail Head.

- Market survey and demand assessment to understand quantum of potential demand.

- Design of various options for master plan with services including facility planning.

- Development of basic engineering design for the finalized master plan for the MMLP including detailed reconnaissance and topographical surveys.

- Provision of technical specifications for operation and maintenance of the proposed MMLP.

- Financial and economic viability of the project with detailed assessment of possible institutional mechanisms for implementation keeping also in view multiple scenario in view from perspective of stakeholders listing out anticipated benefits and challenges of each scenario and suggest the most viable model, lay out detailed implementation plan, Guide NHIDCL to implement it on ground within the specified time frames;

- Social and environmental impact assessment including analysis of cultural properties, natural habitats, involuntary resettlement etc.
- Comprehensive assessment of internal and external risks along with suitable mitigation measures & strategies
- Alignment of relevant stakeholders (MoRTH, NHIDCL, Railways, potential developers and operators, local and state governments etc.) on key recommendations and project outputs
- Activities related to Land Acquisition and getting statutory clearances like Environmental clearances, forest clearance etc. for MMLP and external trunk connectivity infrastructure
- Preparation of bid documents and Draft Concession Agreement. Assistance to the NHIDCL during the procurement process for the contractor addressing queries on the DPR, process and business model.

These have been detailed in the following sections.

### 3.4.3 Benchmarking of best practices, data collection and location suitability analysis

The Consultant shall understand key needs for providing a best-in-class modernised warehousing facility and understand best practices internationally and across India. The output of the benchmarking effort will be a set of five case studies of best practices across the various organizations studied, and a synthesis of relevant practices that could be considered for implementation by NHIDCL. The Consultant will assist in organizing at least one visit of a NHIDCL team to another best-in-class country to understand Logistics Parks and consultant will be responsible for all cost associated with the same..

The consultant shall collect basic information regarding the site, its surrounding and infrastructure. The consultant shall study the planning documents (Master plan and concept development plan etc., if any, of the region) and accordingly align the approach and methodology for further work to be planned under the scope of work of this assignment.

Prior analysis conducted by the client which will form the basis while preparing the Feasibility Study. However, the accurateness of the same should be validated by the consultant, prior to reference.

For all identified land parcels at the node, the consultant shall conduct on-site and other primary surveys required to analyse site suitability.

The parameters for evaluating and assessing the suitability of the identified land parcels should include (but not limited to):

i. Land availability, usability for construction and suitability with respect to future growth and land use

ii. Land acquisition requirements and cost

iii. Connectivity of identified location with key logistics hubs (the consultant will need to map out key warehousing, industrial and logistics hubs within the city through a zonal map and compare the proposed locations)

iv. Required trunk infrastructure (road and rail) to connect the land parcel

v. Impact on logistics cost

vi. Overall financial viability

vii. Statutory Clearance assessment across environment, forest and any other statutory clearances as required

Post this, the consultant shall provide a ranked list of the parcels and a recommendation to proceed with each of the identified parcels. The consultant will need to provide a balanced perspective on the key advantages and disadvantages of each of the sites. The recommendation for the most suitable alternative shall be provided in line with discussion with the stakeholders. Feasibility Study Report needs to be prepared for the parcel agreed on.

### 3.4.4 Infrastructure assessment, planning and design

#### 3.4.4.1 Infrastructure Gap Assessment

The Consultant shall undertake activities not limited to as mentioned below:

i. Assess existing on-site & off-site physical infrastructure like road & rail connectivity, water supply, sanitation, waste disposal, power etc. in the region.

ii. Assess the demand for onsite physical infrastructure (viz. road & rail connectivity, water supply, sewerage/ waste water treatment, power supply, etc.). These requirements/demand may be proposed in a phase-wise manner.

iii. Assess the requirements for providing MMLP trunk infrastructure for the site. It would include estimating the peak hour direction-wise traffic demand by road and rail; assess the requirements for providing access roads, interchanges / grade separators, loading/ unloading, warehousing and truck terminal facilities for goods, parking vehicles in the park.

iv. Conduct preliminary site appraisal specifically for the identified site and proposed products to provide information of infrastructure gaps and tentative risks for the projects.

v. The consultant shall also plan connectivity of the proposed site with ports, inland waterways and air transport systems, as required. The consultant shall suggest suitable alignment options for ensuring connectivity from MMLP with existing networks. The assessment of connectivity in terms of alignment of the docks, barge loading points, air terminals required for connectivity shall be technically feasible and implementable.

vi. The consultant shall also design, estimate and suggest the type and extent of rail and road infrastructure components inside the MMLP and other logistics

parks/industrial plants, which will be required as a part of overall rail and road connectivity.

### 3.4.4.2 Planning, and Detailed Project Report for External Rail connectivity of the MMLP with DFC and Indian Railways

i. The consultant shall plan connectivity of the proposed site with both the rail systems viz. [DFC] and Indian Railways. The consultant shall suggest suitable alignment options for ensuring rail connectivity from MMLP with existing rail network [and also with DFC] along with the provision of reception and dispatch yard for proper connections within the rail system. The assessment of rail connectivity in terms of alignment of the siding, take-off point from Indian Railways, existing and proposed infrastructure required for the rail connectivity shall be technically feasible and implementable.

ii. The consultant shall review and evaluate the feasibility of rail connectivity by undertaking field surveys, as required, to identify structures/obstruction and other important details/features along with various proposed alignment and other connections. The recommendation for most suitable alternative shall be provided in line with discussion with the stakeholders including but not limited to Ministry of Railways.

iii. After assessing most suitable alignment, the Detailed Project Report (DPR) including Detailed Design and drawings shall be submitted. Detailed survey and design shall be done by following the Indian codes and norms in use by Ministry of Railways.

Planning and Detailed Project Report for External Road connectivity of the MMLP with arterial National Highway(s)

a) The consultant shall plan connectivity to the proposed site with arterial National Highway/s. The consultant shall suggest suitable alignment options for ensuring road connectivity from MMLP to the existing arterial highway/s with a provision of interchange, if applicable, for conflict-free movement.

b) The consultant shall review and evaluate the feasibility of road connectivity by undertaking detailed field surveys, as required, to identify structures/obstruction and other important details/features along with various proposed alignment and other connections.

c) After assessing most suitable alignment, the Detailed Project Report (DPR) including Detailed Design and drawings shall be submitted. Detailed survey and design shall be done by following the relevant IRC codes for design of Highways. The broad scope of services for Highway design is mentioned in Section 4.

**Land Acquisition Report**:

1) **For MMLP Land Parcel**

i. The Land acquisition report shall be prepared and submitted for the proposed logistics park. The report shall include detail 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 NHIDCL. The land acquisition report shall be submitted in both Hindi and English languages.

ii. 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 plan and costs of resettlement and rehabilitation of such affected persons. It should also include plan of compensating afforestation, its land requirement with specific locations and cost involved for undertaking all activities in this regard.

iii. The proposed land parcel is owned by the State Government. However, if private land acquisition is additionally needed based on gap assessment, consultant shall be required to prepare all land acquisition papers for the private land under NH Act or State Act, as applicable

**iv. For External Rail and Road Trunk Connectivity Infrastructure**

Consultant shall assess the land requirement for external rail and road connectivity and 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 State Act and help revenue officer for disbursement of land compensation

### 3.4.4.3. Market survey and demand assessment

**I. Current demand assessment**

i. To establish cargo demand and the quantum and nature of the present day inward and outward cargo flows (commodity-wise) by rail, road, air, and other modes of transport, a comprehensive primary and secondary data collection exercise shall be taken up. This will include but not limited to mode-wise physical census of road traffic, origin-destination surveys etc. and other surveys, which deemed necessary to the consultant to assess the incoming and outgoing traffic moving through major inlet and outlet routes (NHs & SHs) connecting the area of influence of the project. The locations and sample size of the surveys are to be decided on the basis of the discussion with the client.

ii. The consultant shall carry out market analysis, which will include freight O-D surveys, competitor analysis, commodity analysis, freight forwarders surveys etc. to estimate the preference and willingness of end-users like truck owners, dealers, distributors, warehouse operators etc. and also intermediate players to shift to Logistics Parks.

iii. The competitor analysis will include analysis of the current traffic demand being catered by existing service providers and market players. This will help in establishing the holistic opinions of entire logistics chain of the regional cargo movement. The information will be collected in the form of personal interviews with the prospective users and recorded on the questionnaires approved in discussion with the client. The consultant should gauge the opinion of stakeholders on issues like locations, time sensitivity range, and price and product sensitivity range. The data collected through primary surveys shall be analysed by the consultant to provide the client a firm idea about the market demand and trends and facilitate client in decision-making.

iv. The perceptions regarding suitability of identified sites for cargo transfer/logistics/warehousing activities needs to be established including interest levels in expanding/ relocating existing facilities to proposed site. The need for

warehousing for interim cargo storage/ collection centres/ distribution centres shall also be evaluated during the surveys using various parameters like preferred formats of warehousing, likely future demand for warehousing supply, occupancy levels within the existing developments, current warehousing rentals and rental growth rates, accessibility and linkages of the locations with catchment areas identified and availability and likely demand of other support infrastructure; such as vehicle maintenance areas, lodging facilities, vehicle parking etc.

v. Identify key end sectors/players/economic activities that could use the logistics park and the demand. This will include listing of all facilities such as ICDs, custom-bond zones, cold-chain facilities, parking terminals, rail- sheds, etc. that would be required at the MMLP based on the market assessment, the formats in which such facilities could be developed, the investment requirement among others.

**II. Future demand trends**

i. The consultant will undertake detailed review of economic and demographic profile of the region to assess the present demand and future growth potential of the project. Opportunity assessment at global, national and regional level in terms of output, FDI, growth, employment, investment trends, industry dynamics, infrastructure availability and man power availability also needs to be carried out.

ii. The consultant will have to prepare commodity and category-wise (Containerized, bulk, break-bulk etc.) traffic projections, which is likely to be handled at the logistics parks for the next 30 years and assessment of its prospects beyond that period.

### 3.4.4.4. Master plan and design of services

i. The consultant has to provide three alternatives for concept master plan layouts and has to finalize a preferred master plan layout in consultation with the stakeholders.

ii. Consultant shall take up detailed master planning for the selected concept master plan alternative for the MMLP. This will include preparation of a conceptual layout plan for the proposed facilities and all the relevant engineering standards to be adopted for construction of various facilities inside the MMLP including the type and number of handling equipment with their technical details, warehousing facilities, inter-modal areas, provisions for areas offering value added services such as cold storage areas, bonded warehouses, amenities for workers, commercial complexes etc.

iii. As a part of overall Master Planning exercise, the consultant shall undertake:

- Master plan for warehouses, including the number of facilities, dimensions of each facility, construction details, raw material to be used, layout of the facility etc.

- Basic structural design, development, operations and maintenance of bonded and unbounded warehousing, covered and open storage, cold storage

facilities and centre for perishable cargo items, ambient storage, paved stacking areas, circulation areas; parking area for trucks and other utility vehicles.

- Define norms relating to the policies for storage of goods and materials based on global best practices. E.g. stacking norms (G+2, G+5 etc.), details regarding provisioning of dedicated area for the purpose of goods declared hazardous should be formulated.

- Specify suitable take off point on the existing network and the extent of network of different models inside the inter-modal area

- If needed, design the master plan and structural design of specialized terminals i.e. container terminal with Container Freight Stations (CFS) for handling container trains, automobile and other freight trains including Ro-Ro and Exim and domestic container trains

- Define functional segregation of areas based upon use (segregation between EXIM, domestic and common amenities, facilities, equipment maintenance areas etc.)

- Define and design the following areas:

o Dedicated space for value added service provision that may encompass packaging/labelling/assembling of semi-finished goods/products within the facility prior to transportation

o CFS hosting stuffing/de-stuffing/packaging and inspection facilities

o Area for various value-added services and repair facilities both for containers, trailers/trucks and handling equipment

o Office space for various user agencies with scope of future expansion

- Engineering Design (including construction schedule & costing) and structural design for the Multi-modal Logistics Park detailing out all designs as envisaged in the master plan. Costing & construction schedule should also be prepared by the consultant for all structural components. The consultant will also need to provide 3D model (8 ft x 8 ft) m as per scale, to be determined in consultation with the client) along with a high resolution graphic simulation video of minimum 3- minute duration with voice over and all elements of Multi modal Logistic park.

iv. A state-of-the-art, fully integrated information technology system including freight information network/system and Electronic Data Interchange (EDI) shall be planned by the consultant for proper operations of the logisticsparks.

v. Consultant will devise a phasing strategy for the master plan of the overall site. It is expected that development of the envisaged facilities in each phase will make MMLP self-sustainable with provision for expansion and integration in the future. The consultant is also expected to keep in view the results of market assessment study while devising the phasing strategy. As a general principle, it may be noted that the consultant should aim at maximum utilization of natural resources. The consultant will prepare the preliminary design for all on-site infrastructure based on the assessment of the requirements.

vi. Consultant shall design the master plan and basic engineering design and drawings of various components of MMLP as per the policies/ rules of State Government/ Authorities/ Central Government

vii. Consultant shall obtain approval of building layout and detailed plan of logistics park from State Government/Authorities/ Central Government as per their policies/rules such as governing building bylaws, etc.

viii. Develop Coordination Protocols with state agencies – Police, Fire and Health Department

ix. Consultant shall conduct safety audit of logistics park specifically building during Feasibility Study stage. Process and infrastructure to attend to injured persons, protect the incident scene, plan for scene documentation and wreckage and debris clearance. Elements such as an Incident Command Center, on-scene emergency lighting procedures, alternate route planning, etc. are to be considered. Process for safe and timely removal of any wreckage and debris, and restoration of logistics park. Elements such as process for expedited crash investigation, towing & recovery and post-incident maintenance planning are to be explored. The consultants shall examine integration of incident management activities for safety and security of logistics park. An integrated approach shall be needed to reduce response time for chaotic and complex situations. The proposed integrated incident management system shall also to generate required reports at various frequencies (daily/weekly/etc.) to carry out analysis and take suitable policy decisions to further improve efficiency of the system (if needed).

## 3.5. Engineering surveys and investigations

### 3.5.1. Reconnaissance

i. The consultant should make an in-depth study of the topographic maps, satellite imageries and air photographs of the project area, geological maps, catchment area maps, contour plans, flood flow data and seismological data and other available relevant information collected by them concerning the existing alignment. Required maps and information needed from potential sources have to be arranged by the consultant. Efforts should be made for maximizing existing land use and minimizing land acquisition.

ii. 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:

- Topographical features of the area
- Typical physical features and land use pattern
- Critical areas requiring detailed investigations
- Requirements for carrying out supplementary investigations
- Soil (textural classifications) and drainage conditions
- Type and extent of existing utility services and their relocation assessment

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

iii. The data derived from the reconnaissance surveys would be utilized by consultant for planning and programming the investigations. All field studies should be taken up on the basis of information derived from the reconnaissance surveys.

iv. The data and information obtained from the reconnaissance surveys should be documented. The data obtained from the reconnaissance surveys should be compiled in the tabular as well as graphical (chart) form indicating the major physical features for NHIDCL's comments. The data analysis and the recommendations concerning 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.

### 3.5.2. Field Engineering Survey

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

ii. Technologies for topographical survey which can meet the following accuracy levels shall be adopted. For land based surveys

(a) Fundamental horizontal accuracy of 2 cm or better

(b) Fundamental vertical accuracy of 2 cm or better

(c) More than 50 points shall be measured per sq. m and for aerial based surveys

(c.i) Fundamental horizontal accuracy of 5 cm or better

(c.ii) Fundamental vertical accuracy of 5 cm or better

(c.iii) More than 10 points shall be measured per sq. m. To establish accuracy, a check point survey using DGPS (for horizontal accuracy) and Auto Level (for vertical accuracy) shall be carried out to establish the fundamental horizontal and vertical accuracy.

iii. The following are the set of deliverables which should be submitted after completion of survey: (a) Raw DGPS data for the entire project site and adjoining areas of interest (b) Point cloud data/ data of points captured for the entire project site and adjoining areas of interest (c) Topographic map of scale 1:250 of the entire project site and adjoining areas of interest (d) Contour map of 10 cm of entire project site and adjoining areas of interest in *.dwg format.

iv. For land based surveys, Mobile LiDAR (Light Detection and Ranging) or equivalent technology that can meet above requirements shall be adopted. For aerial based surveys, Aerial Mobile LiDAR (Light Detection and Ranging) or equivalent technology that can meet above requirements shall be adopted. In shadow areas such as invert levels below culverts, where LiDAR or equivalent

technologies cannot survey accurately, traditional methods of Total Station/ Auto Level shall be used to complete the study.

v. In case of mobile LiDAR or equivalent technology, 360 degree panoramic images of the entire project site and adjoining areas of interest shall be submitted. In case of aerial LiDAR or equivalent technology, ortho-images of the entire highway length and adjoining areas of interest shall be submitted.

vi. The Consultant shall collect details of all important physical features along the project site. These features affect the project proposals and should normally include buildings and structures, monuments, burial grounds, cremation grounds, places of worship, railway lines, stream / river / canal, water mains, severs, gas/oil pipes, crossings, trees, plantations, utility services such as electric, and telephone lines (O/H & U/G) and poles, optical fibre cables (OFC) etc.

vii. The Consultant shall also map out sub-surface utilities. The following criteria shall be met by the process of sub-surface utility mapping: (a) Coverage and mapping of all sub-surface utilities within project site (b) Accurate mapping and resolution of all sub-surface utilities up to a depth of 4 m (c) Differentiation between sub-surface utilities such as live electric cables, metallic utilities and other utilities (d) Sub-surface utilities radar grams further processed into utility maps in formats such as PDF, JPEG and AutoCAD. To meet the accuracy levels, consultant shall use Ground Penetrating Radar, Induction Locator or equivalent technologies.

viii. 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 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.

ix. Based on the outcome of the reconnaissance and field engineering surveys, consultant shall clearly highlight the extent of land preparation activities needed to make the site suitable for development of Multimodal Logistics Parks and the associated costs for the same

## 3.6. Financial and Economic feasibility analysis

### 3.6.1. Financial assessment

i. The consultant shall prepare detailed cost estimates covering the different work components related with the MMLP along with the project construction schedule with particular reference to critical areas of work. As assessed during the demand assessment and Master Planning stages, the consultant will estimate the costs associated with various equipment like gantry cranes, stackers etc. to required be used in logistics park for handling of container and bulk traffic operations. In addition, the consultant shall account for the costs associated with the development and operation of the external trunk infrastructure connectivity, from the Detailed Project Report (scope defined in sections below) of the same. The revenue generation from all the possible activities taking place in the MMLP and the value added service, etc. shall be assessed and recommended to be taken on yearly basis till the financial life of the project. Similarly, the operation and maintenance cost of providing the services

and maintenance of infrastructure including handling equipment and transport fleet shall be calculated to assess the annual recurring expenses of the proposed logistics park. For deciding tariffs for various services, the consultant must carry out trend-based analysis at similar locations for last 5 years. It will provide a sense of basic numbers and basis of annual escalations.

ii. The consultant shall develop a detailed financing model to work out cash flow statement and the financial viability of the project including FIRR along with sensitivity analysis based on the revenue stream and cost of setting up such Multi-modal logistics park. Financial indicators need to be worked out that shall include payback period, IRR, NPV, profitability ratios, sensitivities and scenarios. Sensitivity analysis with parameters like capital cost, operation and maintenance costs, tariff structure, traffic levels etc. may be made to present the viability scenario for taking appropriate decision by the Client. The cost of operation and maintenance should have rational basis with staffing pattern, AMC cost etc. instead of a fixed percentage of capital cost.

iii. Based upon the inputs from the above analysis, alternate financial structures for the project will be developed and a financially viable model will be suggested for the project so as to attract private sector participation and to minimizing the financial burden.

iv. The consultant shall also provide necessary information and prepare documents as per the formats provided by NHIDCL for budgetary approvals and fund allocation for project implementation. Financial analysis should be carried out with respect to multiple scenarios from the perspective of all stakeholders including (but not limited to) MoRTH, state government, NHIDCL, private concessionaire etc.

### 3.6.2. Economic assessment

The consultant should undertake detailed economic analysis for the project, which shall include but not limited to econometric analysis, estimation of economic IRR etc. for the project. The economic internal rate of return (EIRR) will include calculation of all the financial and non-financial benefits of the project in monetary terms. The various non- financial benefits and costs to be considered include the impact on logistics cost of Indian economy, social impact, environmental impact, ecological impact etc.

### 3.6.3. Institutional Mechanisms and Project structuring

i. The consultant shall suggest different institutional mechanisms for setting up and running/managing the logistics park and based on merits/demerits of each, recommend the best possible institutional mechanism for the MMLP based on relevant details specific to the proposed MMLP. The consultant shall also carry out financial scenario/analysis with respect to the proposed project structuring options.

ii. A study of existing legal and institutional frameworks governing the working of logistics operators in India shall also be undertaken by the consultant. The consultant shall analyse the current regulatory ecosystem and recommend interventions required to facilitate smooth operations of Multi-modal Logistics Parks.

iii. Consultant shall evolve broad project structuring model (EPC/PPP) for implementation through private sector funding/ public private partnership and evolve alternative scenarios including considering the option of Viability Gap Funding (VGF) for enhancing the financial viability of integrated logistic hub. The consultant shall suggest the project structuring options by also keeping in mind all the relevant policies and guidelines of various ministries/ authorities (NHIDCL, Indian Railways, MoRTH etc.) issued from time to time.

iv. The consultant shall prepare a summary of the proposed works, stages of project implementation activities and the consultant's recommendations with regards to different aspect of the project.

v. The necessary statutory/administrative clearances required for setting up MMLP from different agencies like customs, environmental authorities, centre/state government and its bodies etc. shall also be identified and listed.

vi. The consultant shall deliberate various service providers/regulatory bodies/government agencies role in setting up of the MMLPs along with necessary statutory provisions and recommend ways for smooth functioning of the MMLPs as a single window facilitation location.

vii. Preparation of bid documents and Draft Concession Agreement. The consultant shall prepare the bid documents and Concession Agreement based on Institutional structure approved by client.

viii. Based on the above sections, the consultant shall prepare Financial Evaluation and Project Structuring modules as part of Feasibility Study Report.

ix. During the procurement of Concessionaire/contractor the consultant shall assist NHIDCL including pre-bid meeting, preparing replies to pre-bid meetings and other clarifications sought during course of appointment of Concessionaire/Contractor.

### 3.7. Social and environmental impact assessment

#### I. Analysis of social impact

i. Social impact assessment to be carried out by conducting both primary, secondary surveys and site visits in order to know the overall social, economic, cultural, religious impact of the project. The report should establish the further action plan required for the project planning and implementation. Following specific tasks to be performed for preparation of social impact assessment:

• Review of the Social Characteristics of the Project

• Site Visit

• Social Screening

• Stakeholders' consultation

• Vulnerable issues

ii. The socio economic surveys to be conducted for 25% of the affected households within the core areas. The assessment of the surrounding areas will be mainly carried out through secondary data & reconnaissance survey with an evenly distributed sample size of 7-10%. Categorization and assessment of

social, land acquisition and resettlement impacts and suggestion for the future action plan to be provided.

iii. The consultant shall prepare compliance procedures for implementation of the project. These will include safety concerns, prevention of child labour, compliance of labour laws in India, acceptable targets for employing women in construction activities, basic wages for skilled / unskilled workers, wage equality, child care facilities of workers around the sites.

iv. The consultant shall undertake preparation of Resettlement Action Plan (RAP) for the project to mitigate, compensate, resettle and rehabilitate the adverse social impacts caused by the proposed project. The RAP will be prepared as per the National Law/Policy, NRRP-2007. A participatory approach shall be adopted in the preparation of RAP wherein local communities will be involved in preparation of the resettlement action plan. Tools such as public consultations, focused group discussions, primary surveys, etc. will be used.

v. The census survey shall include but not limited to:

• Inventory of the 100% properties and persons, potentially affected by the project with categorization and measurements of potential loss

• Physical measurements of the affected assets/structures, including their replacement valuation

• Household characteristics, including social, economic and demographic profile

• Fear/attitudes towards alternative resettlement/ rehabilitation options.
Identification of non-titleholders and their assets

vi. The consultant will conduct public consultation for ensuring participation of people in the planning phase and aiming at promotion of public understanding and fruitful solutions of developmental problems and problem and prospects of resettlement, various sections of PAPs and other stakeholders to be consulted through workshops, focus group discussions and individual interviews.

vii. Mechanisms and benchmarks appropriate to the project for monitoring, evaluating and reporting on the implementation of the resettlement and rehabilitation plan including external monitoring conducted by independent experts. The monitoring and evaluation mechanisms should include arrangements for free, prior and informed consultations with the affected people communities.

viii. RAP report should include but not limited to the following items;

• Description of the project.

• Institutional framework covering the identification of agencies responsible for resettlement activities and NGOs that may have a role in project implementation

• Eligibility (Definition of displaced persons and criteria for determining their eligibility for compensation and other resettlement assistance, including relevant cut-off dates)

• Summary of socio economic surveys

• Summary of census survey

• Valuation of and compensation for losses (The methodology to be used in valuing losses to determine their replacement cost; and a description of the proposed types and levels of compensation under local law and such supplementary measures as are necessary to achieve replacement cost for lost assets.)

• Resettlement measures including entitlement matrix (Description of the packages of compensation and other resettlement measures that will assist each category of eligible displaced persons)

• A summary of the results of the free, prior and informed consultation with the affected people communities that was carried out during project preparation and that led to broad community support for the project

• A framework for ensuring free, prior and informed consultation with the affected people communities during the period of implementation

• People communities during the period of implementation;

• Cost estimates and financing plan;

• Implementation schedule covering all resettlement activities from preparation through implementation, including target dates for the achievement of expected benefits to resettlers and terminating the various forms of assistance

• Accessible procedures appropriate to the project to address grievances by the affected people's communities arising from implementation. When designing the grievance procedures, the consultant should take into account the judicial recourse and customary dispute settlement mechanisms among the affected people.

**II. Analysis of environmental impact**

i. An indicative term of reference for the EIA has been illustrated below. However, the consultant is required to take the Terms of Reference (ToR) clearance from the MoEF/ State Environment Impact Assessment Authority and Environmental study would be carried forward based on the Approved ToR.

ii. The consultant shall prepare Environmental Impact Assessment report in accordance with the requirement of developing a comprehensive environmental baseline database with respect to:

• The quality of existing environment in the project area and 15 km radius of its surroundings.

• CRZ classification and their distances from the project sites (if applicable)

• Whether the site or near surrounding have mangroves or is inhabited by endangered species or is a place for migratory birds or is a spawning area for aquatic species

• Identification of the boundary of recorded forests and the number of trees to be cut (Height, diameter, species etc.)

• Whether the site has any history of industrial pollution or any penalties levied by the Pollution Control Board

• Whether the site has any features like natural drainage channels (nalas), creeks

• Whether there are any fishing villages near the site

• Impacts of salt water intrusion, flooding due to sea level rise and climate change, if applicable

• Whether there are any structures of cultural/historical/religious importance near the site or any ASI (Archaeological Survey of India) designated sites

• Identification of Sensitive Receptors: Sensitive receptors such as schools, hospitals, religious places near the site will be identified using satellite images, field reconnaissance and interviews with local residents

iii. Apart from the above, the environmental baseline database should also include but not limited to the following items;

• Physical environment: geology; topography; soils; climate and meteorology; ambient air quality; surface and ground – water hydrology; coastal and oceanic parameters; existing sources of air emissions; existing water pollution discharges; and receiving water quality;

• Biological environment: flora; fauna; rare or endangered species; sensitive habitats, including parks or preserves, significant natural sites, etc.; species of commercial importance; and species with potential to become nuisances, vectors or dangerous;

• Socio-cultural environment (include both present and projected where appropriate): population; land use; planned development activities; community structure; employment; distribution of income, goods and services; recreation; public health; cultural properties; tribal peoples; and customs, aspirations and attitudes.

iv. The consultant shall conduct studies to assess the influence on physical, chemical and ecological and bio-diversity related aspects of environment in the area

v. The consultant shall describe alternatives that were examined in the course of developing the proposed project and identify other alternatives which would achieve the same objectives. The concept of alternatives extends to siting, design, technology selection, construction techniques and phasing, and operating and maintenance procedures. Compare alternatives in terms of potential environmental impacts; capital and operating costs; suitability under local conditions; and institutional, training, and monitoring requirements. To the extent possible, quantify the costs and benefits of each alternative, incorporating the estimated costs of any associated mitigating measures.

vi. Include the alternative of not constructing the project, in order to demonstrate environmental conditions without it

vii. Based on baseline conditions and the planned project activities, Environmental impacts should be predicted by the standard methodology. These projections would identify whether the pre-project critical environmental conditions would be further degraded. Identify the list of NOCs, clearances, permissions, approvals from relevant authorities (e.g. Forest clearance, permission from ASI, etc.) to be received from various authorities and stakeholders for development, implementation and operation of the project.

viii. The consultant shall determine potential impacts of the MMLP. In this analysis, distinction between significant positive and negative impacts, direct and indirect impacts, and immediate and long-term impacts is to be undertaken to identify the impacts which are unavoidable or irreversible. Wherever possible, the consultant should describe impact quantitatively in terms of environmental costs and benefits.

ix. The environmental management and monitoring plan should be prepared by the consultant including proposed work programs, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the plans. The environmental management plan may be proposed to be made part of the bid document for implementation by the successful bidder. A monitoring system shall also be developed for proper mitigation of the adverse environmental impact and implementation of the plan.

x. The consultant should undertake the review of the authorities and capability of institutions at local, provincial/regional, and national levels and recommend steps to strengthen or expand them so that the management and monitoring plans in the environmental assessment can be implemented.

## 3.8 Project Risk Assessment

As part of the study, the consultant will need to build a comprehensive risk assessment framework across internal and external risks and identify the same for the project. The consultant will need to identify the risk variables and the range of variability for each of the key external and internal risks. In addition, high level impact assessment needs to be conducted along with suitable mitigation measures & strategies.

## 3.9 Stakeholder Alignment & Assistance in Approvals

### I. Stakeholder Alignment

i. The consultant will need to conduct workshops across the duration of the project with the client and relevant stakeholders (MoRTH, NHIDCL, Railways, potential developers and operators, local and state governments etc.) to align on the key recommendations and project outputs.

ii. The consultant will need to indicate workshops and alignment meetings in the work plan proposed as part of the technical bid.

iii. Client & stakeholder visits to existing Multi-modal Logistics Parks outside India for better appreciation of design inputs and key recommendations need to be facilitated by the consultant.

iv. All costs related to workshops and meetings need to be included in the financial bid as part of overhead costs. Costs related to visit to Multi-modal Logistics Parks abroad will be borne by the client. Specific Multi-modal Logistics Parks to be visited will be determined in consultation with the client.

### II. Assistance in obtaining approvals

i. Provide assistance in obtaining necessary statutory/administrative clearances required for setting up of Multi-modal Logistics Parks from different

agencies like environmental authorities, centre/state government and its bodies, Local Authorities etc. and the same shall also be identified and listed.

ii. The Consultant shall make presentations regarding proposals as and when required for obtaining approvals, clearances etc.

iii. The responsibility for explaining/discussing the plans/proposals and designs including modifications thereto, if any, before the various authorities shall remain with the Consultant

### III. Assistance in preparing documents for bid preparation

The consultant will need to assist the client in preparation of necessary documentation for the RFP process for selection of a contractor to execute the project including the following: -

i. Inputs into preparation of tender documents including RFP & RFQ documents

ii. Documents for marketing support in the pre-bid stage

iii. Preparation of draft concessionaire / developer agreement

iv. Preparation of Project Information Memorandum including technical concept of the Multi-modal Logistics Parks, output based technical specifications for construction, technical specifications for Operations & Maintenance

v. Assistance in addressing queries during the bidding process including clarification on technical outputs of the study and any other support as deemed necessary from final submission of detailed project report and award of tender for construction

## 4. Scope of Detailed Project Report for External Road Connectivity

The consultant will have to prepare a Detailed Project Report (DPR) for the construction/widening/upgradation of required length of 4-lane road to connect the Multi Modal Logistics Park to the nearest National Highway / State Highway, as determined during the infrastructure gap assessment. The general scope of DPR preparation is given below:

### 4.1 Primary Tasks

General Scope of Services shall cover but be not limited to the following major tasks:

i. Review of all available reports and published information about the existing road, if any, and the project influence area

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

iii. Detailed Reconnaissance

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

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

vi. Inventory and condition surveys for the existing road, if any

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

viii. Detailed topographic surveys using LiDAR equipped with minimum engineering grade system or any other better technology having output accuracy not less than (a) specified in IRC SP 19 (b) Total Station (c) GPS/ DGPS. The use of conventional high precision instruments i.e. Total Station or equivalent can be used at locations such as major bypasses, water bodies etc. where it may not be possible to survey using LiDAR. Use of mobile / Aerial LiDAR survey is preferable.

ix. Pavement investigations

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

xi. Identification of sources of construction materials;

xii. Detailed design of road, its x-sections, horizontal and vertical alignment and design of embankment of height more than 6m and also in poor soil conditions and where density consideration require, even lesser height embankment. Detailed design of structures preparation of GAD and construction drawings and cross-drainage structures and underpasses etc.

xiii. Identification of the type and the design of intersections

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

xv. Value analysis / value engineering and project costing

xvi. Economic and financial analyses

xvii. Contract packaging and implementation schedule

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

xix. Develop 3D engineered models of terrain and elevation, as-is project highway, proposed and project highway along with all features, current and proposed structures, current and proposed utilities and land acquisition plans.

xx. Preparation of detailed project report, cost estimate, approved for construction Drawings, rate analysis, detailed bill of quantities, bid documents for execution of civil works through budgeting resources.

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

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

## 4.2 Standards and Codes of Practices

**4.2.1.** 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 NHIDCL and reflect the same in the inception report.

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

## 4.3. Quality Assurance Plan

### 4.3.1. (QAP)

i. 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 finalised with the concerned NHIDCL officers immediately upon the award of the Contract and submitted as part of the inception report.

ii. It is imperative that the QAP is approved by NHIDCL before the Consultants start the field work.

### 4.3.2. Data formats for report and investigation results

i. The consultants will need to propose data formats for use in all other field studies and investigations not covered in enclosure IV

ii. The proposed data forms will need to be submitted for the approval of NHIDCL after the commencement of services

## 4.4. Review of Data and Documents

**4.4.1.** 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. Details of sanctioned / on-going works on the stretch sanctioned by MoRTH/other agencies for Tie-in purposes

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; and,

xvi. Vehicle loading behavior (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.

## 4.5. Engineering Surveys and Investigations

### 4.5.1. Reconnaissance and Alignment

i. The Consultant should make an in-depth study of the available land width (ROW) topographic maps, satellite imageries and air photographs of the project area, geological maps, catchment area maps, contour plans, flood flow data and seismological data and other available relevant information collected by them concerning the existing alignment. Consultant himself has to arrange the required maps and the information needed by him from the potential sources. Consultant should make efforts for minimizing land acquisition. Greater use of technology for LA be adopted by the consultant at the DPR stage so as to have a precise land acquisition process.

ii. 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;

a. topographical features of the area;

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

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

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

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

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

g. sections through congested areas;

h. 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:

i. critical areas requiring detailed investigations; and,

j. Requirements for carrying out supplementary investigations.

k. soil (textural classifications) and drainage conditions

l. Type and extent of existing utility services along the alignment (within ROW).

m. Typical physical features along the approach roads

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

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

iv. 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.

v. 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 NHIDCL's comments. The data and the charts should also accompany the rationale for the selection of traffic survey stations.

### 4.5.2. Topographic Surveys

i. 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

ii. The carrying out of topographic surveys will be one of the most important and crucial field tasks under the project. Technologies which can meet the following accuracy levels shall be adopted. For land based surveys (a) Fundamental horizontal accuracy of 5cm or better (b) Fundamental vertical accuracy of 5cm or better (c) More than 50 points shall be measured per sq. m and for aerial based surveys (a) Fundamental horizontal accuracy of 5 cm or better (b) Fundamental vertical accuracy of 5 cm or better (c) More than 10 points shall be measured per sq. m. To establish accuracy, a check point survey using DGPS (for horizontal accuracy) and Auto Level (for vertical accuracy) shall be carried out to establish the fundamental horizontal and vertical accuracy. A minimum of 25 check points, or check points once every 4 km should be established, and these should be strictly different from any geo-referencing or control network points

iii. The following are the set of deliverables which should be submitted after completion of survey:

a. Raw DGPS data for the entire highway length and adjoining areas of interest

b. Point cloud data or equivalent for the entire highway length and adjoining areas of interest in a format/ platform as per industry good practice which shall be amenable to operations by NHIDCL/ Consultant. NHIDCL may decide about format/ platform of point cloud data

c. Topographic map of scale 1:1000 of the entire highway length and adjoining areas of interest

d. Contour map of 50 cm of entire highway length and adjoining areas of interest

e. Cross section of the highway at every 50 m in drawing format.

f. Develop a digital elevation/surface model (bare earth model from survey data) digital terrain model combining topographic data from LiDAR, road inventory and other available sources of data for use while modeling the road alignment and road and structure design.

iv. For land based surveys, Mobile LiDAR (Light Detection and Ranging) or better technology that can meet above requirements shall be adopted. For aerial based surveys, Aerial Mobile LiDAR (Light Detection and Ranging) or better technology that can meet above requirements shall be adopted. Where possible, mobile/terrestrial LiDAR and total station or better studies should be used to supplement aerial LiDAR for the final alignment chosen. Aerial based surveys shall be used as the primary source of topographical data only in cases where a new/green field alignment is being planned and/or major junctions are being planned where it is necessary to significantly increase the survey corridor

beyond the capabilities of mobile LiDAR. In shadow areas such as invert levels below culverts, terrestrial LiDAR shall be used where LiDAR or better technologies cannot survey accurately, traditional methods of Total Station/ Auto Level shall be used to complete the study.

v. In case of mobile LiDAR or better technology, 360 degree panoramic images of the entire highway length and adjoining areas of interest shall be submitted. In case of aerial LiDAR or better technology, ortho-images of the entire highway length and adjoining areas of interest shall be submitted.

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

a. Topographic Surveys along the Existing Right of Way (ROW): Carrying out topographic survey using LiDAR or better technology along the existing road and realignments, wherever required and properly referencing the same with reference pillars fixed on either side of the centre-line at safe places within the ROW

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

c. The detailed topographic surveys should be carried out along the approach roads alignment and location of bridge approved by NHIDCL.

d. Collection/ Extraction 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.

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

a. 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

b. 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 NHIDCL. 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.

c. 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.

d. Where existing roads cross the alignments, the survey will extend a minimum of100 m either side of the road centre line and will be of sufficient width to allow improvements, including at grade intersection to be designed.

viii. The surveyed alignment shall be transferred on to the ground as under:

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

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

c. Boundary Pillars are required to be fixed at the site, at the edge of proposed Right of Way (RoW) as per rules laid down in IRC specification.

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

a. Longitudinal section levels along final centre line shall be taken at every 10 m interval. The levels shall be taken at closer intervals at the curve points, small streams, and intersections and at the locations of change in elevation. The interval shall also be modified as per IRC:SP-19 for rolling, mountainous & steep terrain.

b. 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. The interval shall be modified as per IRC SP 19 for rolling, mountainous & steep terrain.

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

d. 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 upto top of banks and ground levels to a sufficient distance beyond the edges of channel, nature of existing surface soil in bed, banks & approaches, longitudinal section of channel showing site of bridge etc. These shall be as per recommendations contained in IRC Special Publication No. 13 (Guidelines for the Design of Small Bridges

and Culverts) and provisions of IRC:5 ("Standard Specifications & Code of Practice for Road Bridges, Section 1 – General Features of Design").

x. Consultants shall also develop an as-is map of the road including:

a. Geo-referenced digital map of as-is project highway

b. Earth surface, road layers, utilities, buildings and trees with feature data extracted and mapped in layers, marked on the map and tabulated data provided separately.

c. All road, surface, sub surface inventory, pavement investigation and soil survey data to be super-imposed as layers using geo-referencing data

xi. Details of utility Services and Other Physical Features:

a. 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.

b. Consultant shall also map out sub-surface utilities. Accurate mapping and resolution of all sub-surface utilities up to a depth of 4 m shall be carried out. Differentiation between sub-surface utilities such as live electric cables, metallic utilities and other utilities shall be indicated and sub-surface utilities radargrams further processed into utility maps in formats such as PDF, JPEG and AutoCAD shall be furnished. To meet the accuracy levels, consultant shall use Ground Penetrating Radar, Induction Locator or better technologies.

c. 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 LA 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.

### 4.5.3. Road and Pavement Investigations

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

#### i. Road Inventory Surveys

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:

a. Terrain (flat, rolling, mountainous);

b. Land-use (agricultural, commercial, forest, residential etc) @ every kilometre;

c. Carriageway width, surfacing type @ every 500m and every change of feature whichever is earlier;

d. Shoulder surfacing type and width @ every 500m and every change of feature whichever is earlier;

e. Sub-grade / local soil type (textural classification) @ every 500m and every change of feature whichever is earlier;

f. Horizontal curve; vertical curve

g. Road intersection type and details, at every occurrence;

h. Retaining structures and details, at every occurrence;

i. Location of water bodies (lakes and reservoirs), at every occurrence;

j. Height of embankment or depth of cut @ every 200m and every change of feature whichever is earlier.

k. Land width i.e. ROW

l. Culverts, bridges and other structures (type, size, span arrangement and location)

m. Roadside arboriculture

n. Existing utility services on either side within ROW. There shall be a provision of utility corridor for appropriate categories / combination of utilities in the construction of new 4/6 laning of National Highways. Such structures shall be located at appropriate location preferably as close to the extreme edge of Right of Way (RoW). In this connection, guidelines contained in IRC:98 shall be followed.

o. General drainage conditions

p. Design speed of existing road

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.

**ii. Pavement Investigation**

**a. Pavement Composition**

- The data concerning the pavement composition may be already available with the PWD. However, the consultants shall make trial pits to ascertain the pavement composition. The test pit interval will be as per Para 4 below.
- For each test pit, the following information shall be recorded:
  - test pit reference (Identification number, location):
  - pavement composition (material type and thickness); and

- o subgrade type (textural classification) and condition (dry, wet)
- o embankment (composition and geometry)

**b. Road and Pavement Condition Surveys**

- Detailed field studies shall be carried out to collect road and pavement surface conditions. The data should generally cover:
  - o pavement condition (surface distress type and extent);
  - o shoulder condition;
  - o embankment condition; and
  - o drainage condition Pavement Condition
  - o cracking (narrow and wide cracking), % of pavement area affected;
  - o raveling, % of pavement area affected;
  - o potholing, % of pavement area affected;
  - o edge break, length (m); and,
  - o rut depth, mm Shoulder Condition
  - o Paved: Same as for pavement
  - o Unpaved: material loss, rut depth and corrugation,
  - o Edge drop, mm.

Embankment Condition

- o general condition; and
- o extent of slope

Erosion Drainage Condition

- o General condition
- o Connectivity of drainage turnouts into the natural topography
- o Condition in cut sections
- o Condition at high embankments

- The objective of the road and pavement condition surveys shall be to identify defects and sections with similar characteristics. All defects shall be systematically referenced, recorded and quantified for the purpose of determining the mode of rehabilitation.

- In addition to visual means, the pavement condition surveys shall be carried out using Network Survey vehicles mounted with equipment such as high- resolution cameras, digital laser profilometer, transverse profiler- the data from which should be geo-referenced using a DGPS receiver and in vehicle data processing software or equivalent technology to accurately measure the pavement surface properties covered earlier.

- Supplemented by actual measurements and in accordance with the widely accepted methodology (AASHTO, IRC, OECD, TRL and World Bank Publications) adapted to meet the study requirements. The measurement of rut depth would be made using standard straight edges.

- The shoulder and embankment conditions shall be evaluated by visual means and the existence of distress modes (cuts, erosion marks, failure, drops) and extent (none, moderate, frequent and very frequent) of such distress manifestations would be recorded.

- For sections with severe distresses, additional investigations as appropriate shall be carried out to determine the cause of such distresses.

- Middle 200m could be considered as representative sample for each one km. of road and incase all other things are considered similar.

- The data obtained from the condition surveys should be analyzed and the road segments of more or less equal performance may be identified using the criteria given in IRC: 81-1997.

**c. Pavement Roughness**

- The roughness surveys shall be carried out using a network survey vehicle mounted laser profilometer or better technology with specifications as described in para b above

- In addition, the following criteria should be met by the process of defect detection:

o Roughness measurement with outputs of both raw longitudinal profiles and IRI calculation shall be reported at 100m referenced to the preceding LRP. The roughness must meet ASTM-E950 (equivalent to Class I road profiler).

o The IRI shall be determined for both wheel paths over a minimum length of 250m for a minimum of 6 calibration sites with a roughness range between 2m/km and 8m/km. Calibration shall be made for speeds of 20, 30, 40, 50, 60 km/h.

- The surveys shall be carried out along the outer wheel paths. The surveys shall cover a minimum of two runs along the wheel paths for each direction.

- The results of the survey shall be expressed in terms of BI and IRI and shall be presented in tabular and graphical forms. The processed data shall be analyzed using the cumulative difference approach to identify road segments homogenous with respect to surface roughness.

**d. Pavement Structural Strength**

- The Consultants shall carry out structural strength surveys for existing pavements using Falling Weight Deflectometer (FWD) in accordance with IRC 115 or IRC 117 as the case may be.

- It is suggested that the deflection surveys may be carried out as per the scheme given below:

- o mainline testing; and,
- o Control section testing.

- The deflection tests for the mainline shall be carried out at every 500 m along the road sections covered under the study. The control section testing shall involve carrying out deflection testing for each 100 m long homogenous road segment along the road sections. The selection of homogenous segment shall be based on the data derived from pavement condition surveys. The total length of such homogenous segments shall not be less than 100 m per kilometre. The deflection measurements for the control section testing should be at an interval of not more than 10 m.

- Test pits shall be dug at every 500 m and also along each homogeneous road segment to obtain pavement composition details (pavement course, material type and thickness) so as to be able to study if a correlation exists between deflection and composition. If so, the relationship may be used while working out the overlay thickness for the existing pavement.

- Falling weight deflectometre surveys may not be carried out for severely distressed sections of the road warranting reconstruction. The Consultants, immediately upon the award of the contract, shall submit to NHIDCL the scheme describing the testing schedule including the interval. The testing scheme shall be supported by data from detailed reconnaissance surveys.

- It is mandatory for the consultant to use Falling weight deflectometre or alternative better technique for the evaluation of pavement strength, details of such methods or innovative features for deflection testing using Falling weight deflectometre along with the methodology for data analysis, interpretation and the use of such data for pavement overlay design purposes using IRC or any other widely used practices, such as AASHTO guidelines, should be got approved by NHIDCL. The sources of such methods should be properly referenced.

**e. Sub grade Characteristics and Strength**

- Based on the data derived from condition (surface condition, roughness) and structural strength surveys, the project road section should be divided into segments homogenous with respect to pavement condition and strength. The delineation of segments homogenous with respect to roughness and strength should be done using the cumulative difference approach (AASHTO, 1993).

- The data on soil classification and mechanical characteristics for soils along the existing alignments may already be available with the PWD. The testing scheme is, therefore, proposed as given under:

- o For the widening (2-Laning) of existing road within the ROW, the Consultants shall test at least three sub-grade soil samples for each homogenous road segment or three samples for each soil type encountered, whichever is more.

o For the roads along new alignments, the test pits for sub grade soil shall be @5km or for each soil type, whichever is more. A minimum of three samples should be tested corresponding to each homogenous segment.

- The testing for subgrade soil shall include

o in-situ density and moisture content at each test pit

o Field CBR using DCP at each test pit

o Characterization (grain size and Atterberg limits) at each test pit and,

o Laboratory moisture-density characteristics (modified AASHTO compaction);

o Laboratory CBR (unsoaked and 4-day soak compacted at three energy levels) and swell.

- For problematic soils, the testing shall be more rigorous. The characteristics with regard to permeability and consolidation shall also be determined for these soils. The frequency of sampling and testing of these soils shall be finalized in consultation with the NHIDCL officers after the problematic soil types are identified along the road sections.

- The laboratory for testing of material should be got approved from NHIDCL before start of work.

### 4.5.4. Investigations for Bridges and Structures

#### i. Inventory of Bridges, Culverts and Structures

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

#### ii. Hydraulic and Hydrological Investigations

a. 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.

b. The consultant shall also collect information on observed maximum depth of scour.

c. 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, 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 design of bridges. The details of any future planned work that may affect the river hydraulics shall be studied and considered.

d. The Consultant 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.

e. The Consultant 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.

f. 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 RFP documents separately indicating scope and time frame of such study.

**iii. Condition Surveys for Bridges, Culverts and Structures**

a. 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.

b. 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.

c. The assessment of the load carrying capacity or rating of existing bridges shall be carried out under one or more of the following scenarios:

- when the design live load is less than that of the statutory commercial vehicle plying or likely to ply on bridge;
- 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
- Design live load is not known nor are the records and drawings available

d. 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 NHIDCL for limited duration say 12 hours or so.

e. 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.

**iv. Geo-technical Investigations and Sub-Soil Exploration**

a. The Consultant 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:

| Sr. 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. |

b. The deviation(s), if any, by the Consultants from the scheme presented above should be approved by NHIDCL.

c. 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 finalize the bore hole locations in consultation with the NHIDCL officers.

d. Geotechnical Investigations and Sub soil Explorations hall 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.

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

f. The sub-soil exploration and testing should be carried out through the Geotechnical Consultants empanelled by MORTH. The soil testing reports shall be in the format prescribed in relevant IRC Codes.

g. 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.

### 4.5.5. Material Investigations

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

"Environment friendly materials"

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

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

ii. 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.

iii. 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.

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

v. 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.

## 4.6. Detailed Design of Road and Pavements, Bridges, Structures

### 4.6.1. General

The Consultant is to carryout detailed designs and prepare working drawings for the following:

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

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

iii. Bridges, viaduct/subways and other grade separated structures including ROBs/RUBs etc.

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

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

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

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

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

ix. Toll plazas and office-cum-residential complex for PIU (one for each civil contract package)

x. Short bypasses at congested locations

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

xii. Bridges and structures rehabilitation plan with design and drawings

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

xiv. Design of pavement for approach road

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

### 4.6.2. Design Standards

i. The Consultant 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 NHIDCL.

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

### 4.6.3. Geometric Design

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

ii. 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.

iii. 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.

iv. The detailed design for geometric elements shall cover, but not be limited to the following major aspects:

a. horizontal alignment;

b. longitudinal profile;

c. cross-sectional elements, including refuge lane (50m) at every 2kms.

d. junctions, intersections and interchanges;

e. bypasses; and,

f. service roads as and when require i.e. built up area.

v. 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.

vi. The consultant 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 requirements with respect to the different horizon periods taking into account special problems such as road segments with isolated steep gradients.

vii. In the case of closely spaced cross roads the Consultant shall examine different options such as, providing grade separated structure for some of them with a view to reduce number of at-grade crossings, services roads connecting the cross-roads and closing access from some of the intersections and prepare and furnish appropriate proposals for this purpose keeping in view the cost of improvement, impact on traffic movement and accessibility to cross roads. The detailed drawings and cost estimate should include the provisions for realignments of the existing cross roads to allow such arrangements.

viii. The consultant shall also prepare design of grade separated pedestrian crossings (viaducts) for large cross traffic of pedestrians and / or animals on the basis of passenger and animal cross traffic surveys conducted.

ix. 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.

x. The consultant shall prepare design and other details in respect of the parallel service roads in urbanized locations and other locations to cater to the local traffic, their effect of the viability of the project on commercial basis if service roads are constructed as part of the project and the implications of not providing the service roads.

xi. The consultant shall prepare complete road and pavement design including drainage for new bypass option identified around congested town en-route.

### 4.6.4. Pavement Design

i. The detailed design of pavement shall involve:

a. 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;

b. pavement design for bypasses; and,

c. design of shoulders.

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

iii. 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.

iv. 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.

v. 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.

vi. For rehabilitation and strengthening, consultant shall consider the alternatives of rehabilitating the existing pavement, overlaying with the same or alternate pavement type (e.g. white/black topping) and also the option of removal and replacement of existing pavement layers and chose the best alternative basis lifecycle costing, and any local considerations such as material availability, time available for construction etc.

vii. 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. The use of technology particularly environment friendly technology viz. recycling of bituminous mixes, warm mixes and soil stabilization etc. should be adopted wherever feasible. Clause 519 of the "Specifications for Road and Bridge Works" (Fifth Revision) covers specifications for recycling of existing bituminous pavement materials to upgrade the pavements. These provisions notwithstanding, recycling of existing bituminous materials is yet to be implemented in most of the NHIDCL projects. The reclaiming and reprocessing of pavement materials involve both design (how the pavement should be designed using reclaimed materials with the given properties) and technology (the methods to reclaim and reprocess, equipment, knowhow and quality) issues. After addressing these issues, the recycling of pavements will be environmentally and economically better option for rehabilitation, repair or reconstruction compared to the use of fresh or virgin materials. Indian Road Congress has published IRC: 120-2015 on "recommended practice for recycling of bituminous pavements" giving a detailed procedure for its implementation

viii. 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.

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

### 4.6.5. Design of Embankments

i. The embankments design should provide for maximum utilization of locally available materials consistent with economy. Use of fly ash wherever available within economical leads must be considered. In accordance with Government instructions, use of fly ash within 300 km from Thermal Power Stations is mandatory as per extra ordinary Gazette Notification No. S.O. 254 (E) Part Section – III – Sub Section (ii) dated 25th January, 2016 and subsequent amendment, if any of Ministry of Environment, Forest and Climate change, New Delhi.

ii. The Consultant shall carry out detailed analysis and design for all embankments of height greater than 6 m based on relevant IRC publications.

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

### 4.6.6. Design of Bridges and Structures

i. The data collected and investigation results shall be analyzed to determine the following:

a. HFL

b. LWL

c. LBL

d. Erodibility of bed/scour level

e. Design discharge

f. Linear waterway and effective linear waterway

g. Likely foundation depth

h. Safe bearing capacity

i. Engineering properties of sub soil

j. Artesian conditions

k. Settlement characteristics

l. Vertical clearance

m. Horizontal clearance

n. Free board for approach road

o. Severity of environment with reference to corrosion

p. Data pertaining to seismic and wind load

q. Requirement of model study etc.

ii. 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 NHIDCL 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.

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

iv. 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 NHIDCL, the Consultants shall prepare detailed design as per IRC codes/guidelines for all components of the bridges and structures.

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

vi. 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.

vii. 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.

viii. 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.

ix. Subsequent to the approval of the GAD and the alignment plan by NHIDCL, detailed design shall also be carried out for the proposed underpasses, overpasses and interchanges.

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

xi. 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 NHIDCL.

xii. All the bridge structures having a length of 100 m or less can be used for tapping of water for serving dual purpose i.e., to cross the water body or to store water, if technically feasible. Therefore, such structures shall be designed as bridge cum barrage structures (bridge cum bandhara). Ministry's guidelines in this regard issued vide letter no. RW/NH-34066/89/2015-S&R(B) dated 18.04.2017 may be referred.

### 4.6.7. Drainage System

i. 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.

ii. 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.

iii. 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.

iv. The project highway shall be designed to have well designed efficient drainage system, which shall be subsurface, as far as possible. While constructing the underpasses, the finished road level shall be determined so as to ensure that the accumulation of rain water does not take place and run-off flows at the natural ground level. The drains, wherever constructed, shall be provided with proper gradient and connected to the existing outlets for final disposal.

v. The rain water harvesting requirements be assessed taking into consideration the Ministry of Environment & Forest Notification Dt. 14.01.1997 (as amended on 13.01.1998, 05.01.1999 & 06.11.2000). The construction of rainwater harvesting structure is mandatory in and around water scarce / crisis areas notified by the Central Ground Water Board. The provisions for rainwater harvesting be executed as per the requirements of IRC:SP:42-2014 (Guidelines for Road Drainage) and IRC:SP:50-2013 (Guidelines on Urban Drainage).

vi. All the bridge structures having a length of 100m or less can be used for tapping of water for serving dual purpose i.e. to cross the water body and to store water, if technically feasible. Therefore, such structures should be designed as bridge cum barrage structures (bridge cum bandhara). Ministry's guidelines in this regard issued vide letter no. RW/NH-34066/59/2015-S&R(B) dated 18.04.2017 may be referred.

vii. The locations of the culverts should be planned in such a way that the proposed culvert covers optimum catchment area & the location shall be decided on the basis of topographical survey, local rainfall data, gradient of natural ground and enquiry from the local habitants. All culverts should preferably be box culverts as pipe culverts get filled up with silt, which is rarely cleared.

### 4.6.8. Traffic Safety Features, Road Furniture and Road Markings

i. The consultant 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.

ii. The consultant should make the provisions for "the overhead (gantry-mounted) signs on roads with two or more lanes in the same direction" as per provisions of IRC-67. The minimum height of gantry mounted sign be 5.5 m above the highest point at the carriageway.

iii. Road safety shall be the focus of design. The roads shall be forgiving, having self- explaining alignment, safe designed intersections / interchanges segregation and safe crossing facilities for VRUs with crash barriers at hazardous locations. The details of traffic signs and pavement markings with their locations, types and configuration shall be shown on the plan so that they are correctly provided.

iv. DPR shall undergo the exercise of Road Safety Audit through the Road Safety Auditor (separate from design team) and recommendations mentioned be incorporated.

v. Road markings and proper signage constitute another important aspect of the Road safety. The DPR shall contain a detailed signage plan, indicating the places, directions, distances and other features, duly marked on the chainage plan. It shall specify the suitable places where FoBs are to be provided. Road marking and signage plan shall be included in DPR and shall be specifically approved by the NHIDCL.

vi. Advanced Traffic Management System (ATMS) shall be in place for all 4/6 lane roads of NHIDCL being put to tolling. This would provide real time information, guidance and emergency assistance to users. ATMS would include outdoor equipment including emergency call boxes, variable message sign systems, meteorological data system, close circuit TV camera (CCTV) system in addition to any other equipment required to meet the objective. Indoor equipment would include large display board, central computer with Network Management System, CCTV monitor system and management of call boxes system with uninterrupted power supply, all housed in a central control centre. In this connection, NHIDCL's policy circular no.11041/218/2007- Admn dated 15.09.2016 may be referred.

vii. As availability of suitable sight distance has a large effect on road safety, the alignment of all the NHs should be finalized in such a way so as to have double the stopping sight distance available to the road users at all locations.

### 4.6.9. 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. These activities should be included in the TOR for contractor/concessionaire and the cost of these activities shall also be added to the total project cost for civil works. The existing trees / plants shall be retained to the extent possible. The Transplantation of trees shall also be proposed wherever feasible.

### 4.6.10. Miscellaneous Works

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

ii. The Consultants shall prepare the detailed scheme and lay out plan for the works mentioned above.

iii. The Consultants shall prepare detailed plan for the traffic management and safety during the construction period.

## 5. Scope of Detailed Project Report for Inland Water Transport Terminal at Udaipur, Tripura.

### 5.1 Objective of the Study:

The objective of the study is to prepare a DPR for construction of an IWT terminal at Udaipur to enable round the year berthing of the vessels, manual and mechanical handling of cargo. The terminal will also have the facilities for open and covered storage of goods, internal roads, utilities including electricity, water supply, drainage, fire-fighting, landscaping and horticulture as well as external road connectivity with nearest National / State Highway etc. The DPR will inter-alia include all the technical details such as preliminary engineering design, technical specifications, bill of quantities (BoQ) and price schedule etc. along with cost estimate (component / sub-component wise estimated cost) sufficient enough for preparing tender document for execution of the project on Engineering, Procurement & Construction (EPC) mode, all complete as per detailed scope of work given below.

### 5.2. Detailed Scope of Work

Unless explicitly restricted in the Contract, the Scope of Work under the Contract shall include but shall not be limited to the following:

#### 5.2.1 Traffic Assessment

The Consultant shall:

(i) Undertake assessment of existing cargo movements from secondary source / studies made by IWAI or NHIDCL to arise at the potential cargo (type and quantity) to be handle at Udaipur IBP terminal in the base year- 2020-21 and also up to next 30 years.

(ii) Examine current bottlenecks / limitations / disadvantages, including time and other bottlenecks by current transport modes which can be a contributing factor for modal shift to IWT mode;

(iii) Identify cargo, which can be diverted to IWT mode through this terminal (based on S. No. (i) above) including their Origin-Destination (O-D) matrix and also give projections of estimated quantity of cargo likely to be handled at this terminal with adequate reasoning for time periods of 5, 10, 15, 20 & 25 years;

(iv) Based on the above Traffic Assessment, the Consultant shall suggest the infrastructure facilities required at the proposed IWT terminal at Udaipur along with proposal for integration with proposed Jogighopa MMLP.

**Note:** *The required data shall be compiled mainly from secondary sources (published statistics, available relevant reports etc, enquiry with transporter etc.).*

#### 5.2.2 Hydrographic & Topographic Survey

**(i) Hydrographic Survey**

The Consultant shall:

(a) Undertake Hydrographic Survey including bank to bank cross section survey of the river in the terminal area as well as 1 km upstream & 1 km downstream;

(b) Collect the lowest water level (LWL) and highest flood level (HFL) of last six years from Central Water Commission (CWC) / Water Resource Department / other concerned Agencies and be given in the report with supporting documents;

(c) The soundings will be reduced to a Chart Datum (CD). The CD will be the lowest LWL of the last six years collected as above;

(d) The Hydrographic survey will be conducted in cross sections at every 25 m in the main terminal area / river front and every 50 m in the upstream & downstream areas;

(e) Record the current velocity measurements at atleast three locations on both the alternative terminal sites at 0.5d (where d is depth of water) using standard current meter;

(f) Measure the discharge of the river at two cross sections on both the alternative sites during survey period. Apart from this, the discharge of the river during different seasons and different years for the past ten years shall also be collected from CWC / Water Resource Department / other concerned Agencies;

(g) Collect two water samples and two bottom samples of both the alternative terminal sites as per standard practices. For bottom samples, tests namely grain size distribution, specific gravity, pH value, Sand, Silt & Clay percentage shall be carried out and their results given in the report. For water samples, sediment concentration & pH value shall be measured and given in the report;

(h) Prepare all survey charts on the scale of 1:1000; and

(i) Carry out all hydrographic survey works as per standard norms and practices.

**(ii) Topographic Survey**

The Consultant shall:

(a) Undertake Topographic Survey of the entire terminal area site up to the water line during the survey period as per standard norms and practices. Also, undertake Topographic survey of its connectivity with road and rail (if feasible);

(b) Apart from main terminal area, the Topographic Survey will also be carried out in 1 km downstream and 1 km upstream area between the HFL line and the water line during the survey period on both the banks; and

(c) Prepare the topographic survey charts in the scale of 1:1000 and these will include spot levels in a grid of 25 m as well as other physical features (such as structures / houses, trees, natural drains etc.) and contours.

**Note (refer para (i) & (ii) above):** Hydrographic Survey will obviously be carried out in the width of the river between the two waterlines while the Topographic survey will be carried out in the dry portion. Both Hydrographic & Topographic Survey together will provide water depth and levels of the specified areas along the river, 1 km upstream & 1 km downstream area up to the high-water line in the river and the entire terminal area.

### 5.2.3 Geo-technical Investigation

The Consultant shall undertake Geo-technical investigation (boreholes) on the terminal land above HFL (minimum two locations) as well as between highest & lowest waterline (minimum two locations) for the purpose of design of structures (i.e. total four bore holes). The locations of the boreholes shall be clearly marked on the Hydrographic & Topographic survey charts. The Geo-technical investigation shall be carried out as per relevant IS codes & manuals and structures being proposed. The Geo-technical report will include but not be limited to the following:

(a) Methodology;

(b) Laboratory Tests including Bulk Density and Moisture content, Sieve analysis, Hydrometer analysis, Liquid limits & Plastic limits, Specific gravity, Shear test on undisturbed & remoulded saturated disturbed soil samples and determination of void ratio etc;

(c) Detailed Bore logs for each Borehole; and

(d) Foundation Design Calculations including Scour Depth & Bearing Capacity and Recommendations

### 5.2.4 Preliminary Engineering Designs of the finally selected Terminal Site

The Consultant shall:

(i) Collect and Review the available & reports

(a) All relevant data relating to topographic surveys, hydrographic surveys, flow and discharge conditions, water level variations, soil (suspended sediment, bed and bank) conditions, geological, geomorphologic and all other conditions on the Brahmaputra river system available from: IWAI; the Central Water Commission (CWC); CWPRS Pune; concerned State Departments; National Remote Sensing Agency; Survey of India; National Water Development Agency; Central Ground Water Board; National Disaster Management Authority; Irrigation Department / Flood Control Departments and Ministry of Water Resources (MoWR) etc;

(b) All related documents and studies made on system tributaries, distributaries and other rivers connected with NW-2;

(c) Similar studies on other major rivers in India and take into account the recommendations of previous Master Plan studies; and

(d) All data on road, rail and other modes of transport serving the NW-2hinterland including that passing through Indo-Bangladesh Protocol routes (PIWT&T) and various border checks posts / LCS between India & Bangladesh etc.

(ii) Based on the data collected, fix the location and type of berthing jetty to ensure safe berthing of loaded as well as empty vessels during highest and leanest water level periods;

(iii) Examine the adequacy of the existing road linkages between the terminal and MMLP, to facilitate smooth two-way flow of trucks and trailors from / to the terminal and hinterland. Requirement of land acquisition (if any) for widening of road / improvement of bends shall also be studied and taken into account;

(iv) Examine the feasibility of providing rail connectivity to the terminal site along with various activities involved in getting rail connectivity and give sufficient details in this regard. It is however, clarified that detailed study of rail connectivity to the terminal is not part of the scope of work of the present study;

(v) Undertake and provide technical analysis together with preliminary engineering designs & drawings and component / sub-component wise cost estimates based on which development works of the terminal can be undertaken. It may be noted that preliminary engineering design & drawings and other details of every component / sub-component covered in this DPR shall be so detailed as to enable preparation of tender document(s) for carrying out the entire work on EPC mode by IWAI;

(vi) The preliminary engineering designs shall also recommend appropriate designs, drawings and construction standards, which are safe, economical, relevant to traffic projections, local site conditions, environmental requirements, social needs and have considerable design life & economic rate of return;

(vii) The preliminary engineering designs shall cover but not be limited to the following:

(a) Detail terminal layout plan (including future expansion), land development plan, preliminary designs & drawings, BoQ and technical specifications for all structures like berthing jetty, approach jetty, internal roads, covered & open storage along with all allied structures / buildings / facilities like parking of vehicles, security office, bunkering of fuel, utilities including water supply, drainage, firefighting, drainage, horticulture as well as external roads connectivity with nearest National / State Highway & electrical facilities including compound lighting, requirement of power and transformer / generator etc, all complete to handle all types of cargo.

(b) Detailed layout plan along with preliminary design & drawings, BoQ and technical specifications for the shore protection works required to prevent any erosion;

(c) Detailed layout plan along with preliminary design & drawings, BoQ and technical specifications for internal roads, traffic circulation plan, drainage, boundary wall, gate, other utilities and rail connectivity (if feasible); and

(d) Cargo handling equipment required at the terminal including their handling capacities, preliminary drawings, BoQ and technical specifications etc., considering the type and quantity of cargo to be handled as per prevailing norms for operation along with inter-modal compatibility and their merits / demerits.

(viii) Submit detailed design basis reports of all components / sub-components of the project which shall be got reviewed and vetted through IIT / NIT or other reputed Engineering Institute. The Consultant shall coordinate with such professionals & other professionals, attend meetings and provide all necessary information drawings and details sufficient enough for systematic review / vetting of the design proposals before submission to IWAI. The Fee for such Proof checking shall be borne by the Consultant itself.

### 5.2.5 Environment Impact Assessment (EIA)

The Consultant shall:

(i) Assess the environmental impacts due to development works and suggest suitable EMP to mitigate the adverse impacts, if any, including its cost. Only rapid EIA / EMP study is envisaged for which one season data shall be sufficient.

(ii) Assess & bring out in sufficient details along with supporting documents, the need of obtaining environmental clearances for construction of the terminal based on prevailing rules and regulations of Central & State Governments. If environmental clearance is required, the DPR will have a separate chapter on it with detailed action plan and procedure for getting an EIA / EMP study to be taken up by IWAI at a later stage

### 5.2.6 Social Impact Assessment (SIA)

The SIA report shall inter-alia contain the magnitude of Land Acquisition, Resettlement issues and the Mitigation of Impacts. The report shall include the baseline socio-economic characteristics of the Project Affected Families (PAFs) & Project Affected Persons (PAPs), the R&R policy provisions & entitlements, outcome of the consultations held with the communities, implementation and monitoring mechanisms. It shall also contain the budget for implementing the R&R and other provisions related to SIA.

### 5.2.7 Cost Estimates

The Consultant is required to include both the Capital as well as O&M expenses (CAPEX & OPEX) for the project in sufficient details in the DPR. The component / sub-component wise cost estimates shall be based on the Schedule of Rates (SoR) of the Government of Tripura and / or DSR applicable for Tripura. Market Rates can be adopted for those items for which SoR is not available. Transportation of men & material to the construction site taking into account the tough site conditions will be suitably considered in the rates / cost of various components / sub-components. The basis / supporting documents / SoRs considered for various rates used for preparing the cost estimate shall also be submitted along with the DPR.

### 5.2.8 Time Schedule for Project Execution

The Consultant shall prepare detailed & realistic construction time schedule indicating the sequence of activities duly considering the river characteristics in different seasons and priority of works. Suggestion shall also be given for executing the project in different phases with split up of the works (if required) and the costs thereto.

### 5.2.9 Preparation of Tender Document(s) for execution of works

The Consultant shall:

(i) Prepare tender document(s) for execution of works proposed in the DPR on EPC mode which will inter-alia include all necessary detailed Technical Specifications, BoQ, Price Schedule and Special Conditions of Contract. Accordingly, the preliminary designs and cost estimates of every component and sub-component of the DPR will have all such details, authenticity and back up / supporting documents which are required for preparing and processing the tender document(s) for execution of the project on EPC mode as per prevailing norms and practices; and

Assists the Employer in replying any pre-bid queries or technical issues raised during the process of tendering for executing the work from time to time.

## 6. Land Acquisition

### 6.1. Conduct all required surveys/valuation

i. Identify all land parcels that need to be acquired as part of project road/rail and IWT.

ii. Conduct Joint measurement survey in conjunction with CALA, NHIDCL and Land revenue department to verify land records.

iii. Conduct valuation of land related assets (Structures, trees, crops etc.) and liaison with respective State authority for authentication of the valuation.

### 6.2. Digitization of cadastral maps

i. Consultants shall procure or create digitised, geo-referenced cadastral/ land revenue maps for the purposes of land acquisition activities.

ii. Where state governments or local agencies have already digitised cadastral maps, the consultant shall arrange to acquire these maps.

iii. For acquired maps, the consultant shall check and verify the level of accuracy in the maps and their suitability for the purposes of supporting the land acquisition effort for the project road in terms of both dimensional accuracy and details available.

iv. Where digitised land maps are unavailable or are deemed to be insufficient for the purposes of this project, the consultant shall digitize the cadastral/ land revenue maps of the area falling in and surrounding the existing and proposed road RoW, keeping the following in mind:

   a. The digitized map shall exactly match the original map, like a contact print, since the dimensions and area of plots, or the whole village is to be extracted from the map itself.

   b. An accuracy of 1mm or higher in a 1:1000 scale map shall be ensured, as this translates into an accuracy of 1 m or higher on ground.

   c. In addition, ground control points will be used to adjust the digitized map to exactly match the ground situation.

   d. Geo-location information from the control points should be added to the digitized map to allow for import into a GIS system. Suitable land details and features should also be added to the GIS system to enable review of individual land parcels.

   e. In digitization and feature addition, the consultant shall endeavor to follow any standards, requirements and formats laid down by the relevant state/ central government agency for land ownership and revenue management or that set by the authority involved in digitization of land records.

v. Where applicable, the consultant must then share back the digitised cadastral maps with the relevant local agency or state government.

**6.3. Liaison with relevant state departments throughout process**

i. The consultant should liaison with State' departments including but not limited to Land Revenue Office (or Tehsil), Registrar office and with other State departments (like Public works department, horticulture department etc.) to expedite the Land acquisition process.

ii. The consultant should co-ordinate collection of all the necessary land record documents and information required to support CALA/CALA staff during the LA process.

**6.4. Facilitate communication between NHIDCL and CALA**

i. The consultant should ensure prompt official communication (including delivery of documents) between Competent Authority for Land Acquisition (CALA) and NHIDCL.

**6.5. Support CALA with manpower and resources**

i. The consultant should provide adequate technically qualified manpower including but not limited to ex -Amin/Surveyor or equivalent and ex-Land Revenue.

ii. Inspector or equivalent - to support Competent Authority of Land Acquisition (CALA)/ CALA staff in the LA process corresponding to respective project. The engagement of retired Revenue Officer with Team (Kanoongo/ Girdawar or equivalent and Patwari) should be in such a way that one Revenue officer be responsible for 50 km length of DPR or part thereof. These support staff shall be deployed until 3(E), G and H are completed.

iii. The consultant should provide adequate clerical manpower like assistant, peon, computer operator as required to support CALA/CALA staff in the LA process corresponding to respective project.

iv. The consultant should provide adequate resources including vehicles, laptop/desktop, and stationeries as required to support CALA/CALA staff in the LA process corresponding to respective project.

**6.6. Assist NHIDCL and CALA in the publishing of 3A notification**

i. Provide copy of 3a notification to CALAs and District Collector

ii. Co-ordinate collection all the relevant land revenue records (including Khasra maps, khatiyan, Jamabandi etc.) from land revenue department required for preparation of 3A draft

iii. Prepare and submit 3A draft and LA plan in the format prescribed by NHIDCL

iv. Co-ordinate submission of copies of LA plan and Alignment map to CALA offices through PIU required for verification of 3A draft

v. Facilitate CALA staff in verification of the draft 3A version

vi. Assist CALA staff in preparation of 3A notification, preamble and forwarding letter to be forwarded to PIU

vii. Co-ordinate delivery of 3A notification (declared by CALA) along with preamble and forwarding letter to PIU

viii. Assist PIU in preparing 3A notification (English & Hindi version) and corresponding check-list documents in format prescribed to be sent for approval to NHIDCL HQ

**6.7. Assist CALA and NHIDCL in the publishing of 3D notification**

i. Provide copy of 3A Gazette notification to CALA

ii. Support CALA staff to draft 3C notification and 3A notification to be published in 2 newspapers: 1 Vernacular + 1 other

iii. Co-ordinate with NHIDCL/CALA on publishing of 3C and 3A notifications in 2 local newspapers - 1 vernacular and 1 other

iv. Provide copies of newspaper publication of 3C and 3A notification to the CALA

v. Assist CALA staff in receiving and compiling of public objections

vi. Co-ordinate with CALA for scheduling public hearings

vii. Assist CALA staff for sending notices to petitioners on respective hearing dates

viii. Assist CALA during objection hearings, recording of hearings, ensuring compliance of corresponding orders and notification of final CALA order to petitioners

ix. Plant boundary stones/peg-marking along the alignment

x. Conduct Joint measurement survey in conjunction with CALA, NHIDCL and Land revenue department to verify land records. Prepare and submit Joint Measurement Survey Report along with updated alignment sketches of each survey and village to PIU

xi. Co-ordinate collection of all relevant land records including but not limited to Khatiyaan, Jamabandi, Chakbandi and other relevant records required for preparation of 3D draft

xii. Prepare draft 3D based on JMS report and collected records

xiii. Co-ordinate submission of draft 3D to CALA office through PIU

xiv. Assist CALA staff in verification of draft 3D and preparation of draft 3D declared

xv. Assist CALA staff in preparation of draft 3D notification, preamble and forwarding letter to be forwarded to PIU

xvi. Co-ordinate delivery of 3D notification (declared by CALA) along with preamble and forwarding letter to PIU

xvii. Assist PIU in verification of 3D notification (declared by CALA)

xviii. Assist PIU in preparing Draft 3D (English & Hindi version) and corresponding check- list documents in format prescribed to be sent for approval to NHIDCL HQ

**6.8. Assist the CALA in the declaration of award (3G)**

i. Provide copy of 3D Gazette notification to CALA.

ii. Assist CALA in drafting public notice inviting claims (under sub-section 3 of section 3G) from all persons interested in the land to be acquired and 3D notification to be published in 2 local newspaper - 1 vernacular and 1 other.

iii. Co-ordinate with NHIDCL/CALA on publishing of 3D and claim invitation notification in 2 local newspapers - 1 vernacular and 1 other.

iv. Provide 1 copy of newspaper notification of 3D and claim invitation to CALA, Ward, Panchayat, Circle office, police station and Collector office.

v. Assist CALA during claim hearings, record hearings and compliance of corresponding orders.

vi. Conduct valuation of land related assets (Structures, trees, crops etc.) and liaison with respective State authority for authentication of the valuation.

vii. Co-ordinate collection of documents including but not limited to sale deeds, circle rate and other information required by CALA to prepare 3G award

viii. Assist CALA in 3G award preparation and in drafting 3G award documents

ix. Deliver 3G award to PIU for approval along with valuation details

x. Assist CALA staff in preparation of field book which contains award by each

**6.9. Assist NHIDCL in obtaining possession of land**

i. Co-ordinate delivery of confirmation letter of deposit from PIU to CALA

ii. Assist CALA staff in drafting notification for beneficiaries for award collection and vacating the land within 60 days (under section 3E)

iii. Co-ordinate serving of notice to all beneficiaries for collection of award and to vacate the land within 60 days (under section 3E)

iv. Co-ordinate collection of certificate of possession from CALA

**6.10. Utility shifting proposal and estimates**

**6.10.1. Identify type and location of all existing utilities within the proposed ROW**

i. Consultant will review information available with all utilities agencies in the region, consult maps/plans available with NHIDCL, MoRTH and state road agencies, consult with locals and municipal bodies to ascertain the presence and location of utilities, including but not limited to water-mains, gas, telephone, electricity and fiber-optic installations in and around the project road

ii. Deploy ground penetrating radar, inductor locators or better technology to accurately map the location, type and size of utilities in the ROW of the project road as required in the section of this TOR

iii. Develop a detailed strip plan and digitized maps showing:

a. type, size and current location of all the utilities identified

b. relative offset from the centerline

c. existing right of way

### 6.10.2. Plan for utilities in future road design

i. The consultant needs to identify utilities that will require shifting to enable construction of the proposed project road

ii. Incorporate space required for elevated and under-ground utilities corridors and utilities crossings as required for existing and future utilities in consultation with user departments

### 6.10.3. Develop a utilities relocation plan

i. The consultant needs to develop and submit a utilities relocation plan in consultation with NHIDCL and user departments clearly identifying current utilities and suggested relocations along with crossings as required

ii. Plan and conduct discussions, consultations and joint site visits required for the planning of utilities shifting and the development of required drawings and proposals

iii. Prepare necessary details, documents and suggested relocation plan to be submitted to user department

iv. Develop initial cost estimates based on suggested relocation plan and the latest available schedule of rates for inclusion in the cost of the project at the time of approval

### 6.10.4. Estimates and approvals

i. Consultants need to obtain draft utilities shifting proposal from user departments for all utilities identified for shifting along project road

ii. Prepare utility shifting cost estimates using latest schedule of rates and obtain approval from user departments

iii. Review final designs submitted, cost estimates, complete checklist, obtain required declarations and submit to PIU for approval

iv. Work with user department, PIU and RO as required to incorporate any changes requested in shifting proposal and cost estimate by RO and NHIDCL HQ

v. Obtain all required utilities shifting proposal estimates and required approvals from both user departments and NHIDCL within the time stipulated in DPR contract

## 7. Deliverables and timeframe

7.1 All the deliverables as per the list below shall be in the form of 05 (five) hard copies +1 (one) soft copy in MS Word and PDF format for Reports and AUTOCAD DWG & PDF formats for drawings/ plans. The detailed financial model shall also be submitted in excel sheet formats.

7.2 The milestones and timelines of the assignment are given in the table below:

**Table-3: Milestones and timelines**

| Sr. No. | Milestone | Timeline (in days) commencement* |
|---|---|---|
| 1. | Inception Report including proposed connectivity for external trunk infrastructure | D + 15 |
| 2. | Trunk infrastructure gap assessment with draft market overview report for finalisation and approval of suitable site for MMLP<br>ii) Comments of client | D + 30<br>D + 40 |
| 3. | (a) Submission of alternatives for concept Master plan and engineering designs and plans for the selected site and detailed Master plan options for MMLP with preliminary financial case assessment<br>ii) Comments of client | D + 60<br>D + 70 |
| 4. | Finalization of Master plan and Basic Architecture design (2D and 3D) and plans after incorporating client's comments and relevant stakeholders | D + 80 |
| 5. | i) Draft Feasibility Study Report for MMLP including IWT, External Road & Rail Trunk Connectivity Infrastructure, EIA report, EMP and Social Impact Assessment (SIA) report detailed Economic Analysis, Financial Feasibility and Project Structuring aspects etc.<br>ii) Comments of client | D + 90<br>D + 100 |
| 6. | Final Feasibility Study Report for MMLP including IWT, External Road & Rail Trunk Connectivity Infrastructure, after incorporating comments and observations of NHIDCL and other competent authorities including submission of bid documents including Draft Concession Agreement and technical schedule for selection of developing agency. Submission of physical 3D model and simulation graphic video with voice over. | D + 110 |

| | | |
|---|---|---|
| 7. | i) Draft Detailed Project Report MMLP for IWT, External Road & Rail Trunk Connectivity Infrastructure and including submission of bid document including draft CA and TS for selection of developing Agency<br>(a) Submission of all statutory documents for clearances related to Land Acquisition such as 3a, 3A, 3D and 3G notifications, forest clearance stage 1 and draft environment impact assessment report (EIA) clearance, Social Impact Assessment (SIA) and documents related to other clearances required<br>(b) Assessment of shifting of utilities required and providing IWT, road and rail connectivity with requisite land parcel<br>ii) Comments of client | D + 130<br><br>D + 140 |
| 8. | Final Detailed Project Report for MMLP including submission of bid documents including draft CA and TS for selection of developing Agency | D + 150 |
| 9. | i. Obtaining EIA clearance, Stage 1 Forest clearance and obtaining other final statutory clearances;<br>ii. 3G notification related to land acquisition as per LA Act.<br>iii. Obtaining final estimated for utility shifting and requisite utilities required for Multi-modal Logistics Parks from the concerned agencies and submission to client | D + 180 |

Note: *Start date shall be date of Commencement of Services as follows:

(i) D: Date of issuance of LOA & its acceptance by the Consultant.
(ii) NHIDCL at its discretion can foreclose the Contract after completion of Feasibility Report.
(iii) Depending upon the viability and other administrative reasons, authority may or may not continue with the preparation of Detailed Project report for development of Multi Modal Logistics Park at Udaipur in the State of Tripura.

The Team Leader of the consultant will be required to give a presentation to client regarding the broad features of the deliverable before the submission of each deliverable as per the delivery milestone. The comments of the client shall be incorporated in the final scheduled deliverable.

**ENCLOSURE-I**

## MANNING SCHEDULE.

| Sr. No | Key Personnel | Total Project Assignment 06 months |
|---|---|---|
| | | **Total Time Period (man month)** |
| 1 | Team Leader | 6 |
| 2 | Logistics Park Planner | 4 |
| 3 | Warehousing Expert | 4 |
| 4 | Freight Transport Expert | 4 |
| 5 | Financial cum market analyst | 4 |
| 6 | Environment cum social Expert | 4 |
| 7 | Rail Engineer | 4 |
| 8 | Highway Engineer | 4 |
| 9 | Hydrographic Expert | 4 |
| | **Total** | **38** |

1. Consultants have to provide a certificate that all the key personnel as envisaged in the Contract Agreement have been actually deployed in the projects. They have to furnish the certificate at the time of submission of their bills to NHIDCL from time to time.

2. The Consultant shall provide one Land Acquisition Expert along with allied team and supporting logistic as envisaged in Clause 5.1.5.1 of TOR for each district on the stretches proposed for DPR preparation or part thereof

   If delay in LA process occurs beyond the reasonable control of consultant, the extension of LA team staff/s along with logistic support/transportation shall be granted by Nodal Project Director and beyond further 6 months, Regional Officer, NHIDCL is empowered to grant extension to LA team staff/s.

3. All correspondence shall be carried out by Team Leader only and the Team Leader shall attend all the meetings either at Delhi or anywhere else.

**ENCLOSURE-II**

**Qualification and Experience Requirement of Key Personnel**

**(I) Team Leader**

| | | |
|---|---|---|
| i) | **Educational Qualification** | |
| | Essential | Graduate in Civil Engineering/ Planning / Architecture or equivalent or equivalent as approved by AICTE |
| | **Desirable** | **Post graduate in Civil Engineering/ Planning /Architecture/ Management) {AICTE Approved}** |
| ii) | **Essential Experience** | |
| | a)Total Professional Experience | Min. 15 years |
| | b) Experience in handling large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | Min. 12 years |
| | c) Experience of leading the team in advising in program management related to projects in IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs) with minimum size of 50 acres | Min. 2 projects |
| | (d) Experience in preparation/ execution of large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) in key positions outside India with minimum size of 50 acres | Min. 2 projects |
| iii) | **Age Limit** | **65 years on the date of submission of proposal** |

## (II) Logistics Park Planner

| | | |
|---|---|---|
| i) | **Educational Qualification** | |
| | Essential | Graduate in Civil Engineering/ Planning /Architecture or equivalent |
| | **Desirable** | Post Graduate in Civil Engineering /Planning /Architecture |
| ii) | **Essential Experience** | |
| | a)Total Professional Experience | Min. 12 years |
| | b) Experience in planning & design of large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | Min. 10 years |
| | c) Experience in planning & design of large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | Min. 3 projects |
| | d) Experience in planning & design of large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres outside India | Min. 2 projects |
| iii) | **Age Limit** | **65 years on the date of submission of Proposal** |

## (III) Warehousing Expert

| | | |
|---|---|---|
| i) | **Educational Qualification** | |
| | Essential | Degree in Civil Engineering/ Planning/ Architecture or equivalent |
| | **Desirable** | Post Graduate in Engineering/ Planning /Architecture/ Management |
| ii) | **Experience** | |
| | a)Total Professional Experience | Min. 12 years |
| | b) Experience in design of large scale warehouses for infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | Min. 10 |
| | c) Experience in advising in program management related to design of large scale warehouses in IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs) with minimum size of 50 acres in similar capacity | Min. 2 projects. |
| | d) Experience in preparation/ execution of large scale warehouses for infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) in key positions outside India with minimum size of 50 acres | Min. 2 projects. |
| iii) | **Age Limit** | **65 years on the date of submission of Proposal** |

## (IV) Freight Transport Expert

| | | |
|---|---|---|
| i) | **Educational Qualification** | |
| | Essential | Graduate in Logistics / Supply Chain or equivalent preferably post graduate in Transportation /logistics / supply chain /economics. |
| | Desirable | Post Graduate in Business Administration in Operations or equivalent |
| ii) | **Essential Experience** | |
| | a) Total Professional Experience | Min. 12 years |
| | b) Experience in handling the inbound/outbound logistics for large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | Min. 10 years |
| | c) Experience in advising large players on logistics/supply chain design / improvements with advisory fee more than INR 1 cr in similar capacity | Min. 2 projects |
| | d) Experience in handling the inbound/outbound logistics for large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) in key positions outside India with minimum size of 50 acres | Min. 2 projects |
| iii) | **Age Limit** | **65 years on the date of submission of Proposal** |

## (V) Financial cum Market analyst

| | | |
|---|---|---|
| i) | **Educational Qualification** | |
| | Essential | Graduate in Management (Finance)/ Economics/ Statistics. |
| | Desirable | Masters in Management(Finance)/ Economics/ Statistics |
| ii) | **Essential Experience** | |
| | a) Total Professional Experience | Min. 12 years |
| | b) Experience in Financial Analysis/financial structuring appraisal and user- product mix and all the surveys associated with the above for infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres in similar capacity | Min. 10 years |
| | c) Experience in Financial Analysis/financial structuring appraisal and user- product mix and all the surveys associated with the above for large infrastructure projects related to IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port- based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs) with minimum size of 50 acres | Min. 4 projects. |
| | d) Experience in similar capacity for large infrastructure projects/ program of similar nature in the field of Infrastructure Finance and PPP / EPC projects including econometric analysis and estimating economic NPV & IRR for large scale planning of infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | Min. 4 projects |
| iii) | **Age Limit** | **65 years on the date of submission of Proposal** |

## (VI) Environment cum Social Expert

| | | |
|---|---|---|
| i) | **Educational Qualification** | |
| | Essential | Graduate in Environmental Engineering / Social Sciences or equivalent. |
| | Desirable | Masters in Environmental Engineering / Social Sciences or equivalent |
| ii) | **Essential Experience** | |
| | a) Total Professional Experience | Min. 8 years |
| | b) Experience in environmental impact assessment, environmental management plan, statutory clearance management & clean development mechanism related to large scale infrastructure projects in similar capacity | Min. 4 projects |
| | c) Experience in social impact assessment, resettlement and rehabilitation and management plan related to large scale infrastructure projects in similar capacity | Min 4 projects. |
| iii) | **Age Limit** | **65 years on the date of submission of Proposal** |

## (VII) Rail Engineer

| | | |
|---|---|---|
| i) | **Educational Qualification** | |
| | Essential | Graduate in Civil Engineering/ or equivalent. |
| | Desirable | Post graduate in Transportation Engineering |
| ii) | **Essential Experience** | |
| | a) Total Professional Experience | Min. 15 years |
| | b) Experience in planning and design of rail connectivity projects | Min. 12 years |
| | c) Experience in planning and design of rail connectivity projects | Min. 3 projects |
| iii) | **Age Limit** | **65 years on the date of submission of Proposal** |

## (VIII) Road Engineer

| | | |
|---|---|---|
| i) | **Educational Qualification** | |
| | Essential | Graduate in Civil Engineering/ or equivalent. |
| | Desirable | Post graduate in Highway Engg. /Transportation Engineering |
| ii) | **Essential Experience** | |
| | a) Total Professional Experience | Min. 15 years |
| | b) Experience in Highway/Roads Projects- Experience in Design/ Pavement Design of Highway/Roads Projects (2/4/6 lane) | Min. 12 years |
| | c) Experience in Similar Capacity in Design/ Pavement Design of Highway/Roads Projects (2/4/6 lane) as Team Leader or Highway Engineer (Minimum aggregate length 30 km of equivalent four lane, Conversion factor for experience of two lane is 50%) | Min. 3 projects |
| iii) | **Age Limit** | **65 years on the date of submission of Proposal** |

## (IX) Hydrographic Expert

| | | |
|---|---|---|
| i) | **Educational Qualification** | |
| | Essential | ITI in Survey / Diploma in Civil Engineering, |
| | Desirable | Graduate in Civil Engineering/ or equivalent. |
| ii) | **Essential Experience** | |
| | a) Total Professional Experience | Min. 12 years |
| | b) Experience in conducting hydrographic surveys, investigations & measurements, bathymetric surveys/ topographic survey in a variety of geographical locations. | Min. 10 years on similar projects in design and/or construction |
| | c) Experience in similar capacity: Conducting hydrographic surveys, investigations & measurements, bathymetric surveys/ topographic survey in a variety of geographical locations. | Experience of at least 3 projects |
| iii) | **Age Limit** | **65 years on the date of submission of Proposal** |

**ENCLOSURE-III**

**Schedule for submission of Reports and Documents**

| Sr. No. | Milestone | No. of Copies | Timeline (in days) commencement* |
|---|---|---|---|
| 1. | Inception Report including proposed connectivity for external trunk infrastructure | 05 (Five) Hard Copies + 1 (One) Soft Copy (in pdf and doc format) | D + 15 |
| 2. | Trunk infrastructure gap assessment with draft market overview report for finalisation and approval of suitable site for MMLP<br>ii) Comments of client | 05 (Five) Hard Copies + 1 (One) Soft Copy(in pdf and doc format) | D + 30<br>D + 40 |
| 3. | (a) Submission of alternatives for concept Master plan and engineering designs and plans for the selected site and detailed Master plan options for MMLP with preliminary financial case assessment<br>ii) Comments of client | 05 (Five) Hard Copies + 1 (One) Soft Copy<br>(in pdf and doc format) | D + 60<br>D + 70 |
| 4. | Finalization of Master plan and Basic Architecture design (2D and 3D) and plans after incorporating client's comments and relevant stakeholders | 05 (Five) Hard Copies + 1 (One) Soft Copy<br>(in pdf and doc format) | D + 80 |
| 5. | i) Draft Feasibility Study Report for MMLP including IWT, External Road & Rail Trunk Connectivity Infrastructure, EIA report, EMP and Social Impact Assessment (SIA) report detailed Economic Analysis, Financial Feasibility and Project Structuring aspects etc.<br>ii) Comments of client | 05 (Five) Hard Copies + 1 (One) Soft Copy<br>(in pdf and doc format) | D + 90<br>D + 100 |
| 6. | Final Feasibility Study Report for MMLP including IWT, External Road & Rail Trunk Connectivity Infrastructure, after incorporating comments and observations of NHIDCL and other competent authorities including submission of bid documents including Draft Concession Agreement and technical schedule for selection of developing agency. Submission of physical 3D model and simulation graphic video with voice over. | 05 (Five) Hard Copies + 1 (One) Soft Copy<br>(in pdf and doc format) | D + 110 |

| | | | |
|---|---|---|---|
| 7. | i) Draft Detailed Project Report MMLP for IWT, External Road & Rail Trunk Connectivity Infrastructure and including submission of bid document including draft CA and TS for selection of developing Agency<br>(a) Submission of all statutory documents for clearances related to Land Acquisition such as 3a, 3A, 3D and 3G notifications, forest clearance stage 1 and draft environment impact assessment report (EIA) clearance, Social Impact Assessment (SIA) and documents related to other clearances required<br>(b) Assessment of shifting of utilities required and providing IWT, road and rail connectivity with requisite land parcel<br>ii) Comments of client | 05 (Five) Hard Copies + 1 (One) Soft Copy<br><br>(in pdf and doc format) | D + 130<br><br>D + 140 |
| 8. | Final Detailed Project Report for MMLP including submission of bid documents including draft CA and TS for selection of developing Agency | 05 (Five) Hard Copies + 1 (One) Soft Copy<br><br>(in pdf and doc format) | D + 150 |
| 9. | i. Obtaining EIA clearance, Stage 1 Forest clearance and obtaining other final statutory clearances;<br>ii. 3G notification related to land acquisition as per LA Act.<br>iii. Obtaining final estimated for utility shifting and requisite utilities required for Multi-modal Logistics Parks from the concerned agencies and submission to client | 05 (Five) Hard Copies + 1 (One) Soft Copy<br><br>(in pdf and doc format) | D + 180 |

**The checklist for different stages of submission of report has been enclosed as under and the same shall be appended with proper references and page numbering. The checklist/s shall be appended with the report without which no payment shall be made.**

**ENCLOSURE-IV**

## Formats for submission of Reports and Documents

### 1. Standard formats for deliverables

i. During the course of the assignment to prepare detailed project report, several reports, drawings and documents will need to be submitted by the consultants to NHIDCL.

ii. For the purposes of submission, format requirements have been laid out for some of the reports and drawing deliverables in this enclosure, which shall be adhered to strictly

iii. In addition, consultants are to align and agree with NHIDCL officials the format of submission for all reports, during the inception stage as mentioned in clause 10.2 of this terms of reference

### 2. Format for submission of report deliverables

#### 2.1 Printed hard copies of reports

i. All reports and documents shall be submitted in both printed hard copy and digital formats

ii. For hard copies, the consultant shall submit bound volumes (and not in 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

#### 2.2 Digital copies of reports

1. Every report shall also be submitted in digital format to the authority in the following formats:

i. The final report as submitted in the portable document format (.pdf) ii. An editable document in the relevant Open Document Format for Office Applications (ODF) and if available the relevant Microsoft Office document format (MS Office)

iii. All tables and models used to and referred to in the reports shall also be submitted as spread-sheets in the relevant ODF format and MS Office format

iv. The digital copies of reports shall be submitted in the form of removable storage devices (CD or USB pen drive) and also hosted on a secured online document storage and retrieval platform as described in clause 2 Data products

2. The removable storage device submitted at each deliverable stage shall contain:

i. Reports for that stage

ii. All draft and final reports previously submitted

iii. Correspondence with NHIDCL

iv. Clients' comments on submitted reports

v. Any communication, letters and approvals to and from other government and local agencies and any other relevant body

vi. An updated index of all the contents on the removable storage device

3. Every submission will be accompanied by a table of contents and index of all documents submitted for ease of reference

## 2 Data products

1. During the course of the assignment, the consultant shall perform several surveys and collect data that will be used for the design of the road and delivered to the client.

2. Consultants are encouraged to keep commonly available software and data packages, and typical uses for data while deciding final formats of data within the constraints of this document or where a format has not been defined

3. As required in clause **Error! Reference source not found. Error! Reference source not found.,** consultants are required to agree with NHIDCL all actual data formats proposed to be used for the project

4. In order to standardise data formats and simplify hand over and re-use of data, some requirements for minimum content and format are laid down below.

5.

| Sr No | Data product | Contents required (definition) | Data format |
|---|---|---|---|
| 0 | Formats to be used | List of data, drawing and design outputs, reporting format, digital format suggested, key data to be included (column headers), units and system to be used | CSV or ODF sheet, .xlsx optional |
| 1 | Traffic surveys | | |
| 1.1 | List of traffic survey points | Point no, location coordinates (lat, long), location of survey point, chainage, no lanes/type of junction, type of survey, date of survey, length of survey, any commentary, equipment/technique used, link to survey output | CSV or ODF sheet, .xlsx optional |
| 1.2 | Classified traffic volume count survey | Survey point, survey location, location id (ihmcl), no of lanes, chainage, location coordinates (lat, long), date, time and period of survey | Raw data: IHMCL Traffic survey data format<br>Processed, corrected with AADT: CSV or ODF sheet, .xlsx optional |

| | | | |
|---|---|---|---|
| 1.3 | O-D, turning movement, axle load and other surveys | Survey point, survey location, location lat, long, chainage, date, time, period of survey, technique/equipment used in addition to the survey data itself | CSV or ODF sheet, .xlsx optional |
| 2 | Engineering surveys and investigations | | |
| 2.1 | Raw DGPS data | Notes must contain Date, time of survey, equipment | CSV or ODF, Receiver |
| | | used, corrections applied is any. Data: Survey benchmarks, benchmark points, location data points | Independent Exchange Format (RINEX) |
| 2.2 | LiDAR point cloud | Notes must contain Date, time of survey, equipment, summary post processing applied. Data: Survey benchmarks, data points, point cloud of entire project corridor as defined in | LASer file format for exchange<br>CSV sheet, .xlsx optional |
| 2.3 | Images | 360 Deg/ ortho images of entire project road way | Geographic Tagged Image File Format (GeoTIFF) |
| 2.4 | Video | Traverse video of entire project length | Audio video interleave (.avi) or MPEG-4 file (.mp4) |
| 2.5 | Topographic map + contours | 1:1000 scale map with 50 cm contours with roadway marked on maps | Contours: geo-referenced shape files (.shp) or .dxf files, .dwg/.dgn files options |
| 2.6 | Digital elevation model | Digital terrain modeled from aerial and ground surveys | Digital elevation model inUSGS Spatial Data transfer standard (SDTS) format |
| 2.7 | Longitudinal and cross sections | Location of cross section - existing, design chainage, lat, long, Cross section drawing | .dxf files, .dwg/.dgn files options |

| | | | |
|---|---|---|---|
| 2.8 | As-is road map | 3D digital map of as-is project highway containing earth surface, road layers, utilities, buildings and trees with feature data extracted and mapped in layers, marked on the map and tabulated data provided separately. All road, surface, sub surface inventory, pavement investigation and soil survey data to be super-imposed as layers | Digital terrain model and maps in LandXML/.dxf format, .dwg/.dgn files options<br>Separate CSV or ODF sheet, .xlsx optional of feature data in addition to map |
| 2.9 | Details of utility | type of utility, no, class and category of utility installation (e.g. 66 kV xlpe), location, distance from centerline, user agency | CSV or ODF sheet, .xlsx optional |
| 2.10 | Utility maps | geo-referenced schematic map, existing and design road centerline, type of utility, size, no, class and category | georeferenced shape files (.shp) and drawings in .dxf format |
| 2.11 | Road inventory surveys | All data as required in clause 4.11.3.1, georeferencing for each row of data in lat, long form | CSV or ODF sheet |
| 2.12 | Pavement investigation | Test pit reference id, location, chainage, georeference (lat, long), pavemet composition - layer no, material type, thickness, sub grade type, and condition | CSV or ODF sheet |
| 2.13 | Pavement condition survey | Data as required in clause 4.11.3.2, along with location/chainage and geo-reference for all data | CSV or ODF sheet |
| 2.14 | Pavement structural strength | FWD results as per IRC guidelines, geo-referencing for test points | CSV or ODF sheet |
| 2.15 | Sub-grade and soil strength | In the format of the testing lab, summary details must be tabulated and must include: test pit no, location, chianage, lat/long, date, time of test, tester/lab details, in-situ density, moisture content, field CBR, characterization, in-lab moisture and density, lab CBR | Summary in CSV or ODF sheet |
| 3 | Proposed roadway designs | | |

| | | | |
|---|---|---|---|
| 3.1 | Proposed alignment geometry | Georeferenced centerline horizontal and vertical alignment for the road<br>To be presented superimposed on surface map, satellite imagery and digital elevation model of region | Geometry or shape files : .shp/.dxf, .dwg/.dgn files options |
| 3.2 | Final alignment geometry | Georeferenced centerline horizontal and vertical alignment for the road. Additional detail on lanes, super elevation, junctions, structures, under/overpasses, PUP/CUP, wayside amenities etc | Geometry or shape files : .shp/.dxf, .dwg/.dgn files options |
| 3.3 | Proposed roadway model | Proposed digital roadway model and design data- including embankment, road way, road layers, roadside amenities, signals, road furniture, markings and other construction elements in 3D | .dxf/.dtm |
| 3.4 | Proposed structures | Geo referenced location and alignment, 3D model of structure and appurtenances, cross section, plan and profile drawings for construction as per IRC | .dxf/.dtm |
| 3.5 | Proposed highway cross sections | Roadway cross sections for homogenous sections | .dxf files<br>Digital surface model in .dxf format |
| 4 | Other deliverables | | |
| 4.1 | Digitized cadastral maps | Digitized revenue map overlaid with key landmarks, land size, survey number and ownership data. min 1:1000 scale map with >1mm accuracy | Geometry or shape files : .shp/.dxf, .dwg/.dgn files options |
| 4.2 | Financial analysis | Spreadsheet model with instructions, index and containing all inputs and assumptions, time series construction and operating costs, revenues, financing and equity cash flows, NPV/IRR, sensitivity scenarios and results | ODF sheets, MS office .xlsx optional |

## 3 Online hosting and archival of deliverables

### 3.1 Hosting deliverables online

i. The consultant shall store all deliverables from this assignment on a secure online file hosting platform that is remotely accessible by authorised users on the world wide web

ii. The consultant shall provide read only access to all relevant officers of NHIDCL and provide further access to additional users as and when requested by NHIDCL.

iii. Consultant shall provide a point of contact for access to these files, solving any technical issues and shall respond to all requests in a timely manner

iv. Consultant shall ensure that the files are hosted in a platform that conforms to any file hosting and file sharing security standards as may be laid down by the government of India

**3.2 Deliverables to be hosted**

i. Data and deliverables to be hosted in an online accessible format shall include but not be limited to:

ii. All draft and final deliverables in the digital formats prescribed in this TOR and in file formats in wide use where formats are not specified

iii. Data, images and videos from all surveys and investigations conducted of this enclosure

iv. All correspondence to and from NHIDCL including clients' comments on submitted reports

v. Any communication, letters and approvals to and from other government local agencies and any other relevant body

vi. The platform shall also contain an index and table of contents of information being hosted for ease of access and use

**3.3 Time period and costs**

i. Access to above mentioned files will be provided till the end of construction (final commercial operations date of contractor/ concessionaire) of all packages that form a part of this assignment at the cost of the consultant

ii. Access to additional users shall also be at no additional cost to the authority

## Appendix II

# Proof of Eligibility
# Form EI

Letter of Proposal on Applicants Letter Head

Date and Reference

To
The Dy. General Manager
3rd Floor PTI Building, 4-Parliamnet Street,
New Delhi 110001

**Sub: Appointment of Consultant for "Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti".**

Dear Sir,

With reference to your RFP Document dated ……, I/we i.e M/s---------- ---------- (Name of Bidder) having examined all relevant documents and understood their contents, hereby submit our Proposal for selection as Consultant. The proposal is unconditional and unqualified.

2. All information provided in the Proposal submitted and in the Appendices is true and correct and all documents accompanying such Proposal are true copies of their respective originals.

3. This statement is made for the express purpose of appointment as the Consultant for the aforesaid Project.

4. I/We shall make available to the Authority any additional information it may deem necessary or require for supplementing or authenticating the Proposal.

5. I/We acknowledge the right of the authority to reject our application without assigning any reason or otherwise and hereby waive our right to challenge the same on any account whatsoever.

6. I/We certify that in the last three years, we or any of our Associates have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Applicant, nor been expelled from any project or contract by any public authority nor have had any contract terminated by any public authority for breach on our part.

7. I/We understand that you may cancel the Selection Process at any time and that you are neither bound to accept any Proposal that you may receive nor to select the Consultant, without incurring any liability to the Applicants in accordance with Clause 1.7 of the RFP document.

8. I/We declare that we/any member of the consortium, are/is not a Member of any other Consortium applying for Selection as a Consultant.

9. I/We certify that in regard to matters other that security and integrity of the country, we or any of our Associates have not been convicted by a Court of Law or indicted or adverse orders passed by a regulatory authority which would cast a doubt on our ability to undertake the Consultancy for the Project or which relates to a grave offence that outrages the moral sense of the community.

10. I/We further certify that in regard to matters relating to security and integrity of the country, we have not been charge-sheeted by any agency of the Government or convicted by a Court of Law for any offence committed by us or by any of our Associates.

11. I/We further certify that no investigation by a regulatory authority is pending either against us or against our Associates or against our CEO or any of our Directors/Managers/employees.

12. I/We hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Authority [and/ or the Government of India] in connection with the selection of Consultant or in connection with the Selection Process itself in respect of the above mentioned Project.

13. ~~Deleted.~~

14. I/We agree and understand that the proposal is subject to the provisions of the RFP document. In no case, shall I/we have any claim or right of whatsoever nature if the Consultancy for the Project is not awarded to me/us or our proposal is not opened or rejected.

15. I/We agree to keep this valid for 120 (One hundred and twenty) days from the Proposal Due Date specified in the RFP.

16. A Power of Attorney in favor of the authorized signatory to sign and submit this Proposal and documents is attached herewith.

17. In the event of my/our firm/consortium being selected as the Consultant, I/we agree to enter into any Agreement in accordance with the form Appendix V of the RFP. We agree not to seek any changes in the aforesaid form and agree to abide by the same.

18. I/We have studied RFP and all other documents carefully and also surveyed the Project site. We understand that except to the extent as expressly set forth in the Agreement, we shall have no claim, right or title arising out of and documents or information provided to us by the Authority or in respect of any matter arising out of or concerning or relating to the Selection Process including the award of Consultancy.

19. The Proof of Eligibility and Technical proposal are being submitted in separate covers in hard copy (as per clause 4.1 of LoI). Financial Proposal is being submitted online only. This Proof of Eligibility read with Technical Proposal and Financial Proposal shall constitute the Application which shall be binding on us.

20. I/We agree and undertake to abide by all the terms and conditions of the RFP Document. In witness thereof, I/we submit this Proposal under and in accordance with the terms of the RFP Document.

Yours faithfully,
(Signature, name and designation of the authorized signatory)
(Name and seal of the Applicant/Lead Member)

**APPENDIX-II**

**Form-E2/T3**

FIRM'S REFERENCES

Relevant Services Carried out in the Last Seven Years (2015-16 onwards) Which Best Illustrate Qualifications

The following information should be provided in the format below for each reference assignment for which your firm, either individually as a corporate entity or as one of the major companies within a consortium, was legally contracted by the client:

<table>
<tr><td colspan="2">Assignment Name:</td><td>Country:</td></tr>
<tr><td colspan="2">Location within Country :</td><td>Professional Staff<br>Provided by your firm:</td></tr>
<tr><td colspan="2">Name of Client :</td><td>No. of Staff :</td></tr>
<tr><td colspan="2">Address :</td><td>No. of Staff Months :</td></tr>
<tr><td>Start Date<br>(Month /<br>Year)</td><td>Completion Date<br>(Month / Year)</td><td>Approx. Value of<br>Services : (in INR/current USD) :</td></tr>
<tr><td colspan="2">Name of JV/Association Firm(s) if any :</td><td>No. of Months of Professional Staff provided by Associated Firm(s)</td></tr>
<tr><td colspan="3">Status of your Company in the Assignment i.e., Sole/Lead Member/Other Member/Associate</td></tr>
<tr><td colspan="3">Narrative Description of Project :</td></tr>
<tr><td colspan="3">Description of Actual Services Provided by your Company:</td></tr>
</table>

Signature of Authorized Representative

(Certificate from Employer regarding experience should be furnished)

**APPENDIX-II**

**Form- E3**

Financial Capacity of the Applicant Name of Applicant:

| Sr. No. | [Financial Year]* | Annual Revenue (Rs.) |
|---|---|---|
| 1 | 2021-22 | |
| 2 | 2020-21 | |
| 3 | 2019-20 | |

Certificate from the Statutory Auditor[$]

This is to certify that ---------- (name of the Applicant) has received the payments shown above against the respective years on account of Consultancy Services.

Name of the audit firm Seal of the audit firm Date

(Signature, name and designation of the authorized signatory)

$In case he Applicant does not have a statutory auditor, it shall provide the certificate from its chartered accountant that ordinarily audits the annual account of the Applicant.

Note:

*Financial year to be modified as applicable

Please do not attach any printed Annual Financial Statement.

**APPENDIX-II**

**Form- E4**

**(Deleted)**

**APPENDIX-III**

**(Form-T1)**

**TECHNICAL PROPOSAL**

**FROM:** **TO:**

_____ _____

_____ _____

_____ _____

_____ _____

Sir:

**Sub: Appointment of Consultant for "Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti".**

**Regarding Technical Proposal**

I/We_____(name of Bidder) Consultant/ Consultancy firm herewith enclose Technical Proposal for selection of my/our firm/organization as Consultant for

Yours faithfully,

_____

Signature

Full Name

Designation

Address

**(Authorized Representative)**

**(Form-T-2)**

Details of projects for which Technical and Financial Proposals have been submitted

| Sl. No. | Name of Project | Consultancy Package No. | Names of Proposed Key Personnel |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

**Form-E2/T3**

FIRM'S REFERENCES

Relevant Services Carried out in the Last Seven Years Which Best Illustrate Qualifications

The following information should be provided in the format below for each reference assignment for which your firm, either individually as a corporate entity or as one of the major companies within a consortium, was legally contracted by the client:

<table>
<tr><td colspan="2">Assignment Name:</td><td>Country:</td></tr>
<tr><td colspan="2">Location within Country :</td><td>Professional Staff Provided by your firm:</td></tr>
<tr><td colspan="2">Name of Client :</td><td>No. of Staff :</td></tr>
<tr><td colspan="2">Address :</td><td>No. of Staff Months :</td></tr>
<tr><td>Start Date<br>(Month / Year)</td><td>Completion Date<br>(Month / Year)</td><td>Approx. Value of Services : (in INR/current USD) :</td></tr>
<tr><td colspan="2">Name of JV/Association Firm(s) if any :</td><td>No. of Months of Professional Staff provided by Associated Firm(s)</td></tr>
<tr><td colspan="3">Status of your Company in the Assignment i.e., Sole/Lead Member/Other Member/Associate</td></tr>
<tr><td colspan="3">Narrative Description of Project :</td></tr>
<tr><td colspan="3">Description of Actual Services Provided by your Company:</td></tr>
</table>

Signature of Authorised Representative

(Certificate from Employer regarding experience should be furnished

**Form- T4**

SITE APPRECIATION

Shall give details of site as per actual site visit and data provided in RFP and collected from site supported by photographs to demonstrate that responsible personnel of the Consultant have actually visited the site and familiarized with the salient details/complexities and scope of services.

**Form- T5**

**Composition of the Team Personnel and the task Which would be assigned to each Team Member**

I. Technical/Managerial Staff

| Sr .No. | Name | Position | Task Assignment |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| ……. | | | |

II. Support Staff

| Sr .No. | Name | Position | Task Assignment |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| ……. | | | |

**Form- T6**

## APPROACH PAPER ON METHODOLOGY PROPOSED FOR PERFORMING THE ASSIGNMENT

The approach and methodology will be detailed precisely under the following topics.

1) Methodology for services, surveying, data collection [not more than 2 pages] and analysis

2) Quality Assurance system for consultancy assignment [not more than 1 page]

3) The key challenges foreseen and proposed solutions will be detailed precisely under the following topics

   a) proposed alignment and bypass required

   b) land acquisition requirements

   c) access control, rehabilitation of existing road, drainage and utilities

   d) adoption of superior technology along with proof (to be submitted in Form T9)

Replies to items 3) a) to c) should be limited to six A4 size pages in 1.5 space and 12 font including photographs, if any

**Form- T7**

**Details of Material Testing Facility**

**(Detail are to be submitted along with the certificates)**

1. State whether the Applicant has in-house Material Testing Facility Available / Outsourced / Not Available

2. In case answer to 1 is Available, attach a list of Lab equipment and facility for testing of materials and location of laboratory

3. In case laboratory is located at a distance of more than 400 km from the project site, state arrangements made / proposed to be made for testing of materials

4. In case answer to 1 is Outsourced / Not Available state arrangements made / proposed to be made for testing of materials.

**Form- T8**

**Facility for Field investigation and Testing**

1. State whether the Applicant has in-house Facility for

    a) Geo-technical investigation Available (created in-house at site)/ Outsourced/ Not Available

    b) Pavement investigation Available (created in-house at site)/ Outsourced/ Not Available

2. In case answer to 1 is Available (created in-house at site) a list of field investigation and testing equipments available in-house

3. In case answer to 1 is Outsourced/ Not Available arrangements made/proposed to be made for each of above Field investigation and testing

4. For experience in LIDAR or better technology for topographic survey, GPR and Induction Locator or better technologies for detection of sub-surface utilities and digitization of cadastral maps for land acquisition, references need to be provided in following format:

REFERENCES

Relevant Services Carried Out Which Best Illustrate Qualifications

The following information should be provided in the format below for each reference assignment for which your firm, either individually as a corporate entity or as one of the major companies within a consortium, was legally contracted by the client:

<table>
<tr><td colspan="2">Assignment Name:</td><td>Country:</td></tr>
<tr><td colspan="2">Location within Country :</td><td>Professional Staff Provided by your firm:</td></tr>
<tr><td colspan="2">Name of Client :</td><td>No. of Staff :</td></tr>
<tr><td colspan="2">Address :</td><td>No. of Staff Months :</td></tr>
<tr><td colspan="3">Technology Used:</td></tr>
<tr><td>Start Date (Month / Year)</td><td>Completion Date (Month / Year)</td><td>Approx. Value of Services : (in INR/current USD) :</td></tr>
<tr><td colspan="2">Name of JV/Association Firm(s) if any :</td><td>No. of Months of Professional Staff provided by Associated Firm(s)</td></tr>
<tr><td colspan="3">Status of your Company in the Assignment i.e., Sole/Lead Member/Other Member/Associate</td></tr>
<tr><td colspan="3">Narrative Description of Project :</td></tr>
<tr><td colspan="3">Description of Actual Services Provided by your Company:</td></tr>
</table>

Signature of Authorised Representative

(Certificate from Employer regarding experience should be furnished)

**Form- T9**

## Office Equipment and software

**Attach a list of office equipment and software owned by the Applicant**

**Form- T10**

## (Curriculum Vitae)

**CVs of the Key Personnel should be submitted in the hard copies as per the following format along with the Technical Proposals.**

**Form- T11**

Photo

**Format of Curriculum Vitae (CV) For Proposed Key Staff**

1. Proposed Position:
2. Name of Staff:
3. Date of Birth: **(Please furnish proof of age)**
4. Nationality:
5. Educational Qualification:
   (*Summarize college/university and other specialized education of staff member, giving names of schools, dates attended and degrees obtained).* ***(Please furnish proof of qualification)***

   Contact Address with Phone and mobile numbers:
6. Membership of Professional Societies:
7. Publication:
   (List of details of major technical reports/papers published in recognized national and international journals)
8. **Employment Record:**

   (Starting with present position, list in reversed order, every employment held. List all positions held by staff member since graduation, giving dates, names of employing organization, title of positions held and location of assignments. For experience ***period of specific assignment must be clearly mentioned,*** also give client references, where appropriate).

9. Summary of the CV

(Furnish a summary of the above CV. The information in the summary shall be precise and accurate. The information in the summary will have bearing on the evaluation of the CV).

A) Education:

i) Field of graduation and year

ii) Field of post-graduation and year

iii) Any other specific qualification

B) Experience

i) Total experience in highways: ___ Yrs.

ii) Responsibilities held: a) ___Yrs.
b) ___Yrs.
c) ___Yrs.

iii) Relevant experience: ___ Yrs.

C) Permanent Employment with the firm: ___Yrs.
If yes, how many years:
If no, what is the employment:
Arrangement with the firm?

Certification:

1 *I am willing to work on the project and I will be available for entire duration of the project assignment and I will not engage myself in any other assignment during the currency of this assignment on the project*

2 I, the undersigned, certify that to the best of my knowledge and belief, this biodata correctly describes myself my qualification and my experience.

**Signature of the Candidate** _____

Place _____
Date _____

**Signature of the Authorized Representative of the firm**_____

Place _____
Date _____

Note: Each page of the CV shall be signed in ink by both the staff member and the Authorized representative of the firm. Photocopies will not be considered for evaluation.

## UNDERTAKING FROM THE PROFESSIONAL

**Name of Work:**

**Position in the Team:**

I, ……. (Name) have not left any assignment with the consultants/ contractors engaged by Client viz. MoRT&H /NHAI/NHIDCL/ IAHE/BRO/ State PWD or any other MoRTH implementing agency without completing my assignment. I will be available for the entire duration of the current project for which I am being included in the team. If I leave this assignment in the middle of the completion of the work, I may be debarred for an appropriate period to be decided by Client. I shall also have no objection if my services are extended by Client for this work in future.

I, the undersigned, also certify that to the best of my knowledge and belief, my biodata, information and credentials submitted truly describe myself, my qualification and my experience. I shall be liable for any action, as deemed fit, in case there is any mis- representation in this regard.

Date:

Place:

Signature

(Name of Key Personnel)

## UNDERTAKING FROM CONSULTING FIRM

**Name of Work:**

The undersigned on behalf of.....(Name of Consulting Firm) with ……. certify that none of the Key Personnel included in our team to the best of our knowledge has left his/her assignment with any consulting/ contracting firm engaged by MoRT&H /NHAI/NHIDCL/ IAHE/BRO/ State PWD or any other MoRTH implementing agency. We also confirm the truthfulness of the credentials submitted by our firm/JV Member/Associate and all the Key Personnel proposed in our team.

We understand that if any information about our firm/JV Member/Associate / Key Personnel is found contrary to what has been submitted, the Client would be at liberty to remove the concerned personnel from the present assignment and debar our firm/JV Member/Associate / Key Personnel for an appropriate period to be decided by the Client.

Date:

Place:

Signature

(Name of Authorized Signatory)

**APPENDIX-IV**

**(Form-I)**

**FINANCIAL PROPOSALS**

FROM: _____ TO: _____

_____ _____

_____ _____

Sir:

Subject: Consultants' Services for

_____

_____

Regarding Price Proposal

I/We_____Consultant/consultancy firm herewith enclose *Price Proposal for selection of my/our firm/organization as Consultant for

_____

Yours faithfully,

Signature

_____

Full Name_____

Designation_____

Address_

(Authorized Representative)

*The Financial proposal is to be filled strictly as per the format given in RFP.

**(Form-II)**

## Format of Financial Proposal

## Summary of Cost in Local Currency (INR)

| Sl No | Package | Name of the Participant/bidder for respective packages |
|---|---|---|
| **BoQ** | As per Annex-1 of LOI | |

**(Form-III)**

Validate Print Help Item Rate BoQ

**Tender Inviting Authority: NHIDCL**

**Name of Work: Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti.**

**BOQ**
**Contract No: NHIDCL/MMLP/Udaipur/Tripura/2020**

| **Bidder Name :** | |
|---|---|

**PRICE SCHEDULE**

**(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )**

| NUMBER # | TEXT # | NUMBER # | TEXT # | NUMBER # | NUMBER # | TEXT # |
|---|---|---|---|---|---|---|
| **Sl. No.** | **Item Description** | **Quantity** | **Units** | **BASIC RATE In Figures To be entered by the Bidder (excluding GST) Rs.** | **TOTAL AMOUNT (excluding GST)** | **TOTAL AMOUNT (Excluding GST) In Words** |
| **1** | **2** | **4** | **5** | **13** | **54** | **55** |
| 1 | **Remuneration for Local Staff (inclusive of per Diem allowance)** | | | | | |
| 1.1 | Team Leader | 6.00 | Months | | **0.00** | INR Zero Only |
| 1.2 | Logistics Park Planner | 4.00 | Months | | **0.00** | INR Zero Only |
| 1.3 | Warehousing Expert | 4.00 | Months | | **0.00** | INR Zero Only |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.4 | Freight Transport Planner | 4.00 | Months | | **0.00** | INR Zero Only |
| 1.5 | Financial cum Market Analyst | 4.00 | Months | | **0.00** | INR Zero Only |
| 1.6 | Environment cum Social Expert | 4.00 | Months | | **0.00** | INR Zero Only |
| 1.7 | Rail Engineer | 4.00 | Months | | **0.00** | INR Zero Only |
| 1.8 | Road Engineer | 4.00 | Months | | **0.00** | INR Zero Only |
| 1.9 | Hydrographic Expert | 4.00 | Months | | **0.00** | INR Zero Only |
| 2 | **Sub-Professional Staff** | | | | | |
| 2.1 | Assistant Logistics Park Planner | 6.000 | Months | | **0.00** | INR Zero Only |
| 2.2 | Assistant Warehousing Expert | 6.000 | Months | | **0.00** | INR Zero Only |
| 2.3 | Assistant Freight Transport Planner | 6.000 | Months | | **0.00** | INR Zero Only |
| 2.4 | Assistant Financial cum Market Analyst | 6.000 | Months | | **0.00** | INR Zero Only |
| 2.5 | Assistant Environment cum Social Expert | 6.000 | Months | | **0.00** | INR Zero Only |
| 2.6 | Assistant Rail Engineer | 6.000 | Months | | **0.00** | INR Zero Only |
| 2.7 | Assistant Road Engineer | 6.000 | Months | | **0.00** | INR Zero Only |
| 2.8 | Assistant Hydrographic Expert | 6.000 | Months | | **0.00** | INR Zero Only |
| **3** | **Cost towards preparation of Inception Report for MMLP at Udaipur, complete in all aspects.** | 1.000 | Lump Sum | | **0.00** | INR Zero Only |

| | | | | | | |
|---|---|---|---|---|---|---|
| **4** | **Cost towards DPR preparation of External Road Trunk Connectivity Infrastructure for the MMLP, Complete in all aspects (Preparation of DPR for external road/s connectivity complete in all respect including incidental to the work).** | 1.000 | Lump Sum | | **0.00** | INR Zero Only |
| **5** | **Cost towards DPR preparation of External Rail Trunk Connectivity Infrastructure for the MMLP, Complete in all aspects (Preparation of DPR for external rail connectivity complete in all respect including incidental to the work).** | 1.000 | LumpSum | | **0.00** | INR Zero Only |
| **6** | **Cost towards DPR preparation of Inland Water Transport (IWT) Terminal complete in all respect including incidental to the work.** | 1.000 | LumpSum | | **0.00** | INR Zero Only |
| **7** | **Other Overheads (Fixed Cost)** | | | | | |
| 7.1 | Overheads such as Transportation cost, office rent, office supplies, communications, furniture, equipment, and Other overheads incidental to the work. | 1.000 | LumpSum | | **0.00** | INR Zero Only |
| **8** | **Reports, Document Printing, 3D Model and Graphic video** | | | | | |
| 8.1 | Inception Report Including proposed connectivity for external trunk infrastructure in a set containing 5 (Five) Hard Copies + 1 (One Soft Copy) | 1.000 | Set | | **0.00** | INR Zero Only |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8.2 | Trunk infrastructure gap assessment with draft market overview report for finalisation and approval of suitable site for MMLP in a set containing 5 (Five) Hard Copies + 1 (One Soft Copy) | 1.000 | Set | | **0.00** | INR Zero Only |
| 8.3 | (i) Submission of alternatives for concept Master plan and engineering designs and plans for the selected site and detailed Master plan options for MMLP with preliminary financial case assessment.(ii) Submission of all statutory documents for clearances related to Land Acquisition such as 3a, 3A, 3D and 3G notifications, forest clearance stage 1 and draft environment impact assessment report (EIA) clearance, Social Impact Assessment (SIA) and documents related to other clearances required.(iii) Assessment of shifting of utilities required and providing road and rail connectivity with requisite land parcel (iv) Draft Feasibility Report of External Road and Rail Trunk Connectivity Infrastructure.All submissions at (i) to (iv) above shall be in a set containing 5 (Five) Hard Copies + 1 (One Soft Copy) | 1.000 | Set | | **0.00** | INR Zero Only |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8.4 | Finalization of Master plan and Basic Architecture design (2D and 3D) and plans after due consultation with client and relevant stakeholders and Final Feasibility Report of MMLP and External Road and Rail Trunk Connectivity Infrastructure in a set containing 5 (five) Hard Copies + 1 (One) Soft Copy. | 1.000 | Set | | **0.00** | INR Zero Only |
| 8.5 | (i) Draft Detailed Project Report for MMLP including EIA report, EMP and Social Impact Assessment (SIA) report detailed Economic Analysis, Financial Feasibility and Project Structuring aspects etc.<br>(ii) Draft Detailed Project Report for External Rail and Road Connectivity Infrastructure.<br>All submissions at (i) & (ii) above shall be in a set containing 5 (Five) Hard Copies + 1 (One) soft copy. | 1.000 | Set | | **0.00** | INR Zero Only |
| 8.6 | (i) Final Detailed Project Report for MMLP after incorporating comments and observations of NHIDCL and other Competent Authorities including submission of bid documents including draft Consession Agreement and technical schedule for selection of developing agency. Submission of physical 3D model and simulation graphic video with voice over.<br>(ii) Final Detailed Project Report for External Rail | 1.000 | Set | | **0.00** | INR Zero Only |

| | | | | | | |
|---|---|---|---|---|---|---|
| | and Road Trunk connectivity infrastructure and including submission of bid document including draft CA and TS for selection of developing agency.<br>All submissions at (i) & (ii) above shall be in a set containing 5 (Five) Hard Copies + 1 (One) soft copy. | | | | | |
| 8.7 | (i) Obtaining EIA clearance, Stage 1 Forest Clearance and obtaining other final statutory clearances;<br>(ii) 3G notification related to land acquisition as per LA Act.<br>(iii) Obtaining final estimates for Utility shifting and requisite utilities required for Multi-Modal Logistics Park from the concerned agencies and submission to client.<br>All submissions at (i) & (iii) above shall be in a set containing 5 (Five) Hard Copies + 1 (One)<br>soft copy. | 1.000 | Set | | **0.00** | INR Zero Only |
| 8.8 | 3D model | 1.000 | Number | | **0.00** | INR Zero Only |
| 8.9 | Simulation Graphic Video with voice over | 1.000 | Number | | **0.00** | INR Zero Only |
| **9** | **Survey and Investigation related to land parcel of MMLP** | | | | | |
| 9.1 | Topograhical Survey (Fixed Rate): Topograhic Survey including hire charges for equipment and supply of survey teams comprising of project survey filed staff etc. Inclusive of cost of materials, labourer. | 1.000 | LumpSum | | **0.00** | INR Zero Only |

| | | | | | | |
|---|---|---|---|---|---|---|
| 9.2 | Topograhical Survey (Fixed Rate): Detailed topograhic survey using mobile/ aerial LiDAR or equivalent technology. | 1.000 | LumpSum | | **0.00** | INR Zero Only |
| 9.3 | GPR for mapping utilities | 1.000 | LumpSum | | **0.00** | INR Zero Only |
| 9.4 | Other Engineering Investigation (Fixed cost) | 1.000 | LumpSum | | **0.00** | INR Zero Only |
| **Total in Figures** | | | | | **0.00** | INR Zero Only |
| **Quoted Rate in Words** | | **INR Zero Only** | | | | |

** Total Cost excluding GST shall be considered for financial evaluation

Note: No escalation will be payable during the services
**Insurances shall not be allowed separately .These will be incidental to main items.**
***Rates for all items shall be quoted in figures as well as in words.***

Note: The Consultant shall provide one Land Acquisition Expert along with allied team and supporting logistic as envisaged in Clause 5.1.5.1 of TOR for each 100 km stretches proposed for DPR preparation or part thereof (For example total length of package is 343 km, there will be four team).

**(Form-IV)**

Deleted

**(Form-V)**

TENTATIVE QUANTITIES FOR SUB-SOIL INVESTIGATIONS

(BORING) (Form –V)

| S. No | Stretch Proposed for DPR | NH No. | Approximate Length (in Km.) | Package No. | State | Cumulative Tentative Quantities ( in m ) | |
|---|---|---|---|---|---|---|---|
| | | | | | | In Soils other than hard rock | In hard rock |
| 1 | km<br>< **Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti** > | As per List at Annex-1 | As per List at Annex-1 | As per List at Annex-1 | As per List at Annex-1 | 1500 | 200 |

# APPENDIX-V:
## Detailed Evaluation Criteria

**First Stage Evaluation -Proof of Eligibility (Para 12.1 of Data Sheet)**

**5.1 Eligibility criteria for sole applicant firm.**

i. For the sole firm

| Clause | Qualification Criteria | Minimum Requirement |
|---|---|---|
| a) | Experience of preparation of Detailed Project Report/ Feasibility Assessment Report for setting up Integrated Multi Modal Logistics Hub (IMLH)/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs) with minimum size of 50 acres in the last 7 years. Ongoing DPR projects (atleast 90% completed) will also be considered.<br>The emphasis will be on relevance of the projects to the nature of assignment, cost, size and scope of work carried out by the consultant i.e. comparable size, complexity, technical specialty and key components of the projects. | Number of Projects:<br>(i) One work of Detailed Project Report<br>Or<br>(ii) Two works of Feasibility Assessment Report |
| b) | Experience of preparation of Detailed Project Report / Techno – Economic Feasibility study for development of navigation channel for shipping or development of Ports or development of IWT Terminals. | Number of Projects:<br>(i) One work of Detailed Project Report<br>Or<br>(ii) Two works of Feasibility Assessment Report |
| c) | Average Annual Turnover from consultancy services for last 3 financial years i.e. 2017-18, 2018-19, 2019-20. | INR 5 Crores |

**Note: In case IWT is included as part of DPR, no separate experience will be required.**

The firm needs to provide detailed experience certificates for all projects under category ‘a’ and ‘b’ detailing out (but not limited to) project timelines, current status of implementation, project cost, size of the project, capacity of the terminal, key elements of transportation infrastructure, driver amenities and commercial development as applicable from the engaging government agency/ client/ certified by statutory auditor. If the experience certificate from clients is in any other language than English, then English translation of experience certificate by authorized translator shall be submitted along with original certificates.

(i) The sole applicant shall fulfill all the requirements given in Table-1.

(ii) In case of JV, the Lead Partner should fulfill at least 75% of eligibility requirements of any two clauses (a) or (b) above and should fulfill at least 75% of eligibility requirement of clause (c), other partner shall fulfill at least 50% of eligibility requirements of any two clauses (a) or (b) above and should fulfill at least 50% of eligibility requirement of clause (c) and associate partner should fulfill at least 20% of eligibility requirement of clause (c). However, the JV should fulfill all eligibility requirements of clauses (a), (b) and (c) given in table above.

(iii) If the applicant firm has / have prepared the DPR/FS projects solely on its own, 100% weightage shall be given. If the applicant firm has prepared the DPR/FS projects as a lead partner in a JV, 75% weightage shall be given. If the applicant firm has prepared the DPR projects as the other partner (not lead partner) in a JV, 50% weightage shall be given. If the applicant firm has prepared the DPR/FS projects as an associate, 25% weightage shall be given.

The experience claim for private concessionaire/contractor shall be subject to the fact that the facility is operational and the experience certificate clearly mentioning the project details and scope of work is furnished by the consultant along with a certification from a statutory auditor for receipt of professional fee for the engagement.

**5.2 Further break-up of each criteria has been detailed out below:**

| Sr. No. | Description | Points Obtained | Maximum Points |
|---|---|---|---|
| a) | The firm should have undertaken / completed similar projects as mentioned in clause (a) in Table 1 of preparation of Detailed Project Report/ Feasibility Assessment Report for setting up Integrated Multi Modal Logistics Hub (IMLH)/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs) with minimum size of 50 acres in the last 07 years. Ongoing DPR projects (atleast 90% completed) will also be considered.<br>The emphasis will be on relevance of the projects to the nature of assignment, cost, size and scope of work carried out by the consultant i.e. comparable size, complexity, technical specialty and key components of the projects. | One work = 15 points<br><br>*For Each additional work – 2.5 points subject to maximum 5 points. | 20 |
| b) | Experience of preparation of Detailed Project Report / Techno – Economic Feasibility study for development of navigation channel for shipping or development of Ports or development of IWT Terminals. | One work = 10 points<br><br>*For Each additional work – 2.5 points subject to maximum 5 points. | 15 |
| c) | Average Annual Turnover from consultancy services for last 3 financial years i.e. 2017-18, 2018-19, 2019-20. | Firm's Average Turnover of last 3 years > =5 crore = 10 points<br><br>*For Each additional turnover of Rs 2 Cr annually – 2.5 points subject to maximum 5 points. | 15 |
| **Total** | | | **50** |

**Note:** In case feasibility study is a part of DPR services, the experience shall be counted in DPR only. In case IWT is included as part of DPR, the experience will be considered under (a) and (b) both.

i. Annual Average Turn Over for the last 3 years {In cases where, Audited/Certified copy of Balance Sheet for the FY 2019-20 is available, last three years shall be counted from 2017-18 to 2019-20. However, where audited/certified copy of the Balance Sheet for the FY 2019-20 is not available (as certified by the Statutory auditor) then in such cases last three years shall be considered from 2016-17 to 2018-19} of the firm from Consultancy services should be equal to more than Rs 5 crore.}

Partner/Other Partner in case of JV from Consultancy services should be as given below:

| No. | Mode of Submission by a firm | Annual Average Turn Over for the last 5 years |
|---|---|---|
| **1** | Lead Partner in a JV | Rs 3.75 crore |
| **2** | JV Firm as a whole | Rs 5 crore |

ii. Weightage to be given when experience by a Firm as Sole Firm/Lead Partner in a JV/Other Partner in a JV/As Associate

| No. | Status of the firm in carrying out DPR/ Feasibility Study | Weightage for experience |
|---|---|---|
| **1** | Sole firm | 100% |
| **2** | Lead partner in a JV | 75% |
| **3** | Other partner in a JV | 50 % |
| **4** | As Associate | 25% |

iii. The experience claim for private concessionaire/contractor shall be subject to the fact that the facility is operational and provision of an experience certificate with a clear mention of the project area is furnished by the consultant along with a certification from a statutory auditor for receipt of professional fee for the engagement.

iv. Further, for projects for MMLPs or similar facilities outside India, in case of a network firm with branch office/subsidiary in India, projects undertaken by parent firm may be considered subject to provision of an experience certificate with a clear mention of the project scope and area by the consultant along with a certification from a statutory auditor for receipt of professional fee for the engagement.

**Qualification and Competence of the Key Staff for adequacy of the Assignment. Overall marks for CVs of Key Personnel**

| S.No. | Key Personnel | Scaled Down Score (on 50) |
|---|---|---|
| 1 | Team leader | 8 |
| 2 | Logistics Park planner | 7 |
| 3 | Warehousing expert | 5 |
| 4 | Freight transportation expert | 5 |
| 5 | Financial cum market analyst | 5 |
| 6 | Environment cum social expert | 5 |
| 7 | Rail Expert | 5 |
| 8 | Road Expert | 5 |
| 9 | Hydrographic Expert | 5 |

### 5.3 Detailed CV Evaluation criteria

#### 5.3.1 TEAM LEADER

| S. No. | Description | | Max. Points |
|---|---|---|---|
| **I** | **General Qualification** | | **25** |
| **i)** | Degree in Engineering/Planning/ Architecture or equivalent | | 22 |
| **ii)** | Post-Graduation in Civil Engineering/Planning/ Architecture/ Management | | 3 |
| **II** | **Relevant Experience & Adequacy for the Project** | | **70** |
| **(a)** | Total Professional Experience | | 15 |
| | <15 years | 0 | |
| | 15 years | 12 | |
| | For each additional year of experience up to 6 additional years | 0.5 marks per year | |
| **(b)** | Experience in handling large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | | 20 |
| | <12 years | 0 | |
| | 12 years | 16 | |
| | For each additional year of experience up to 8 additional years | 0.5 marks per year | |
| **(c)** | Experience of leading the team in advising in program management related to projects in IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs) with minimum size of 50 acres | | 25 |
| | 2 projects | 20 | |

| | | | |
|---|---|---|---|
| | For each additional project above 2 (up to a maximum of 5 additional projects) | 1 marks per project | |
| **(d)** | Experience in preparation/ execution of large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) in key positions outside India with minimum size of 50 acres | | 10 |
| | 2 projects | 7 | |
| | For each additional project above 2 (up to a maximum of 3 additional projects) | 1 marks per project | |
| **III** | **Employment with Firm** | | **5** |
| | Less than 1 Year | 0 | |
| | More than 1 year | 5 | |
| | **Total** | | **100** |

### 5.3.2 LOGISTICS PARK PLANNER

| S. No. | Description | | Max. Points |
|---|---|---|---|
| **I** | **General Qualification** | | **25** |
| **i)** | Degree in Civil Engineering / Architecture / Planning or equivalent | | 22 |
| **ii)** | Post-Graduation in Civil Engineering /Architecture / Planning or equivalent | | 3 |
| **II** | **Relevant Experience & Adequacy for the Project** | | **70** |
| **(a)** | Total Professional Experience | | 10 |
| | <12 years | 0 | |
| | 12 years | 7 | |
| | For each additional year of experience up to 6 additional years | 0.5 marks per year | |
| **(b)** | Experience in planning & design of large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | | 20 |
| | <10 years | 0 | |
| | 10 years | 16 | |
| | For each additional year of experience up to 8 additional years | 0.5 marks per year | |
| **(c)** | Experience in planning & design of large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | | 20 |
| | <3 Projects | 0 | |
| | 3 Projects | 15 | |
| | For each additional project above 3 (up to a maximum of 5 additional projects) | 1 marks per project | |
| **(d)** | Experience in planning & design of large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres outside India | | 10 |
| | <2 Projects | 0 | |
| | 2 Projects | 8 | |
| | For each additional project above 2 (up to a maximum of 2 | 1 marks per | |

| S. No. | Description | | Max. Points |
|---|---|---|---|
| | additional projects) | project | |
| (e) | Experience in operating large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres and focus on warehousing operations | | 10 |
| | <2 Years | 0 | |
| | 2 Years | 5 | |
| | 2-4 Years | 7 | |
| | 4-6 Years | 9 | |
| | > 6 Years | 10 | |
| **III** | **Employment with Firm** | | 5 |
| | Less than 1 Year | 0 | |
| | More than 1 year | 5 | |
| | **Total** | | **100** |

### 5.3.3 WAREHOUSING EXPERT

| S. No. | Description | | Max. Points |
|---|---|---|---|
| **I** | **General Qualification** | | **25** |
| **i)** | Degree in Engineering/Planning/ Architecture or equivalent | | 22 |
| **ii)** | Post-Graduation in Engineering/Planning/ Architecture/ Management | | 3 |
| **II** | **Relevant Experience & Adequacy for the Project** | | **70** |
| **(a)** | Total Professional Experience | | 15 |
| | <12 years | 0 | |
| | 12 years | 11 | |
| | For each additional year of experience up to 4 additional years | 1 marks per year | |
| **(b)** | Experience in design of large scale warehouses for infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | | 20 |
| | <10 years | 0 | |
| | 10 years | 16 | |
| | For each additional year of experience up to 8 additional years | 0.5 marks per year | |
| **(c)** | Experience in advising in program management related to design of large scale warehouses in IMLH/ Logistics Park/ Inland Container Depot/ | | 25 |

| S. No. | Description | | Max. Points |
|---|---|---|---|
| | Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs) with minimum size of 50 acres in similar capacity | | |
| | < 2 projects | 0 | |
| | 2 projects | 20 | |
| | For each additional project above 2 (up to a maximum of 5 additional projects) | 1 marks per project | |
| **(d)** | Experience in preparation/ execution of large scale warehouses for infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) in key positions outside India with minimum size of 50 acres | | 10 |
| | < 2 projects | 0 | |
| | 2 projects | 8 | |
| | For each additional project above 2 (up to a maximum of 2 additional projects) | 1 marks per project | |
| **III** | **Employment with Firm** | | **5** |
| | Less than 1 Year | 0 | |
| | More than 1 year | 5 | |
| | **Total** | | **100** |

### 5.3.4 FREIGHT TRANSPORTATION EXPERT

| S. No. | Description | | Max. Points |
|---|---|---|---|
| **I** | **General Qualification** | | **25** |
| **i)** | Degree in Engineering /Logistics / Supply-Chain or equivalent | | 22 |
| **ii)** | Post-Graduation in Transportation /Logistics / Supply-Chain / Management (Operations) or equivalent | | 3 |
| **II** | **Relevant Experience & Adequacy for the Project** | | **70** |
| **(a)** | Total Professional Experience | | 15 |
| | <12 years | 0 | |
| | 12 years | 11 | |
| | For each additional year of experience up to 4 additional years | 1 marks per year | |
| **(b)** | Experience in handling the inbound/outbound logistics for large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated | | 20 |

| S. No. | Description | | Max. Points |
|---|---|---|---|
| | Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | | |
| | <10 years | 0 | |
| | 10 years | 16 | |
| | For each additional year of experience up to 8 additional years | 0.5 marks per year | |
| **(c)** | Experience in advising large players on logistics/supply chain design / improvements with advisory fee more than INR 1 cr in similar capacity | | 25 |
| | <2 projects | 0 | |
| | 2 projects | 20 | |
| | For each additional project above 2 (up to a maximum of 5 additional projects) | 1 marks per project | |
| | OR | | |
| | Experience as team leader of supply chain for a publicly listed large player with average annualized revenue of >=1,000 cr | | |
| | <5 years | 0 | |
| | 5 years | 20 | |
| | For each additional year above 5 (up to a maximum of 5 additional years) | 1 marks per year | |
| **(d)** | Experience in handling the inbound/outbound logistics for large scale infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) in key positions outside India with minimum size of 50 acres | | 10 |
| | < 2 projects | 0 | |
| | 2 projects | 8 | |
| | For each additional project above 2 (up to a maximum of 2 additional projects) | 1 marks per project | |
| **III** | **Employment with Firm** | | **5** |
| | Less than 1 Year | 0 | |
| | More than 1 year | 5 | |
| | **Total** | | **100** |

### 5.3.5 Financial cum MARKET ANALYST

| S. No. | Description | | Max. Points |
|---|---|---|---|
| **I** | **General Qualification** | | **25** |
| **i)** | Post Graduate degree in Management(Finance)/Economics/ Statistics | | **25** |
| **II** | **Relevant Experience & Adequacy for the Project** | | **70** |
| **(a)** | Total Professional Experience | | **15** |
| | <12 years | 0 | |
| | 12 years | 11 | |
| | For each additional year of experience up to 4 additional years | 1 mark per year | |
| **(b)** | Experience in Financial Analysis/financial structuring appraisal and user- product mix and all the surveys associated with the above for infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres in similar capacity | | 15 |
| | <10 years | 0 | |
| | 10 years | 11 | |
| | For each additional year of experience up to 4 additional years | 1 mark per year | |
| **(c)** | Experience in Financial Analysis/financial structuring appraisal and user- product mix and all the surveys associated with the above for large infrastructure projects related to IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port- based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs) with minimum size of 50 acres | | 20 |
| | <4 Projects | 0 | |
| | 4 Projects | 15 | |
| | For each additional project above 4 (up to a maximum of 5 additional projects) | 1 mark per project | |
| **(d)** | Experience in similar capacity for large infrastructure projects/ program of similar nature in the field of Infrastructure Finance and PPP / EPC projects including econometric analysis and estimating economic NPV & IRR for large scale planning of infrastructure projects (IMLH/ Logistics Park/ Inland Container Depot/ Airport based Logistics Parks/ Air or Rail Cargo Terminals/ Port-based Logistics Parks/ Free Trade Warehousing Zone (FTWZ)/ Integrated Manufacturing Zone/ Industrial Parks (including SEZs)) with minimum size of 50 acres | | 20 |
| | <4 Projects | 0 | |
| | 4 Projects | 15 | |

| | | | |
|---|---|---|---|
| | For each additional project above 4 (up to a maximum of 5 additional projects) | 1 mark per project | |
| **III** | **Employment with Firm** | | **5** |
| | Less than 1 Year | 0 | |
| | More than 1 year | 5 | |
| | **Total** | | **100** |

### 5.3.6 ENVIRONMENTAL cum SOCIAL EXPERT

| S. No. | Description | | Max. Points |
|---|---|---|---|
| **I** | **General Qualification** | | **25** |
| **i)** | Degree in Environment Engineering / Social Sciences or equivalent | | 22 |
| **ii)** | Post-Graduation in Environmental Engineering/Social Sciences or equivalent | | 3 |
| **II** | **Relevant Experience & Adequacy for the Project** | | **70** |
| **(a)** | Total Professional Experience | | 15 |
| | <8 years | 0 | |
| | 8 years | 11 | |
| | For each additional year of experience up to 4 additional years | 1 marks per year | |
| **(b)** | Experience in environmental impact assessment, environmental management plan, statutory clearance management & clean development mechanism related to large scale infrastructure projects in similar capacity | | 30 |
| | <4 projects | 0 | |
| | 4 projects | 23 | |
| | For each additional project above 4 (up to a maximum of 7 additional projects) | 1 mark per project | |
| **(c)** | Experience in social impact assessment, resettlement and rehabilitation and management plan related to large scale infrastructure projects in similar capacity | | 25 |
| | <4 projects | 0 | |
| | 4 projects | 20 | |
| | For each additional project above 4 (up to a maximum of 5 additional projects) | 1 mark per project | |
| **III** | **Employment with Firm** | | **5** |
| | Less than 1 Year | 0 | |
| | More than 1 year | 5 | |
| | **Total** | | **100** |

### 5.3.7 RAIL Engineer

| S. No. | Description | | Max. Points |
|---|---|---|---|
| **I** | **General Qualification** | | **25** |
| **i)** | Degree in Civil Engineering or equivalent | | 22 |
| **ii)** | Post-Graduation in Transportation Engineering or equivalent | | 3 |
| **II** | **Relevant Experience & Adequacy for the Project** | | **70** |
| **(a)** | Total Professional Experience | | 15 |
| | <15 years | 0 | |
| | 15 years | 12 | |
| | For each additional year of experience up to 3 additional years | 1 marks per year | |
| **(b)** | Experience in planning and design of rail connectivity projects | | 30 |
| | <12 years | 0 | |
| | 12 years | 25 | |
| | For each additional year of experience up to 5 additional years | 1 marks per year | |
| **(c)** | Experience in planning and design of rail connectivity projects | | 25 |
| | < 3 projects | 0 | |
| | 3 projects | 20 | |
| | For each additional project above 3 (up to a maximum of 5 additional projects) | 1 marks per project | |
| **III** | **Employment with Firm** | | **5** |
| | Less than 1 Year | 0 | |
| | More than 1 year | 5 | |
| | **Total** | | **100** |

### 5.3.8 Road Engineer

| S. No. | Description | | Max. Points |
|---|---|---|---|
| **I** | **General Qualification** | | **25** |
| **i)** | Degree in Civil Engineering or equivalent | | 22 |
| **ii)** | Post-graduation in Highway Engg/Transportation Engineering | | 3 |
| **II** | **Relevant Experience & Adequacy for the Project** | | **70** |
| **a)** | **Total Professional Experience** | | **15** |
| | <15 years | 0 | |
| | 15 years | 12 | |
| | For each additional year of experience up to 3 additional years | 1 mark per year | |

| | | | |
|---|---|---|---|
| (b) | **Experience in Highway/Roads Projects - Experience in Design/ Pavement Design of Highway/Roads Projects (2/4/6 lane)** | | **30** |
| | <12 years | 0 | |
| | 12 years | 25 | |
| | For each additional year of experience up to 5 additional years | 1 mark per year | |
| | | | |
| c) | **Experience in Similar Capacity in Design/ Pavement Design of Highway/Roads Projects (2/4/6 lane) as Team Leader or Highway Engineer (Minimum aggregate length 30 km of equivalent four lane, Conversion factor for experience of two lane is 50%)** | | **25** |
| | <3 Projects | 0 | |
| | 3 Projects | 20 | |
| | For each additional project above 3 (up to a maximum of 5 additional projects) | 1 mark per project | |
| **III** | **Employment with Firm** | | **5** |
| | Less than 1 Year | 0 | |
| | More than 1 Year | 5 | |
| | **Total** | | **100** |

### 5.3.9 Hydrographic Expert

| S. No. | Description | | Max. Points |
|---|---|---|---|
| **I** | **General Qualification** | | **25** |
| **i)** | ITI in Survey / Diploma in Civil Engineering, | | 22 |
| **ii)** | Graduate in Civil Engineering/ or equivalent. | | 3 |
| **II** | **Relevant Experience & Adequacy for the Project** | | **70** |
| **a)** | **Total Professional Experience** | | **15** |
| | <12 years | 0 | |
| | 12 years | 12 | |
| | For each additional year of experience up to 3 additional years | 1 mark per year | |
| **(b)** | **Experience in conducting hydrographic surveys, investigations & measurements, bathymetric surveys/ topographic survey in a variety of geographical locations.** | | **30** |
| | <10 years | 0 | |
| | 10 years | 25 | |

| | | | |
|---|---|---|---|
| | For each additional year of experience up to 5 additional years | 1 mark per year | |
| | | | |
| **c)** | **Experience in similar capacity: Conducting hydrographic surveys, investigations & measurements, bathymetric surveys/ topographic survey in a variety of geographical locations.** | | **25** |
| | <3 Projects | 0 | |
| | 3 Projects | 20 | |
| | For each additional project above 3 (up to a maximum of 5 additional projects) | 1 mark per project | |
| **III** | **Employment with Firm** | | **5** |
| | Less than 1 Year | 0 | |
| | More than 1 Year | 5 | |
| | **Total** | | **100** |

# APPENDIX-VI: Draft Contract Agreement

***DRAFT CONTRACT AGREEMENT***

**Between**

**<NHIDCL, Address>**

**and**

**M/s .....in JV with M/s……. and in Association with M/s……**

**For**

## Consultancy Services for <Project Description>

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# DRAFT CONTRACT FOR CONSULTANT'S SERVICES

**INDIA**

**CONTRACT FOR CONSULTANTS' SERVICES**

## Consultancy Services for <Consultancy Services for Preparation of Inception Report & Detailed Project Report (DPR) for Development of Multi Modal Logistics Park at Udaipur in the State of Tripura under PM Gati Shakti >

**(From** km_____**to** km_____Of NH.. in the State of ….**)**

This CONTRACT (hereinafter called the "Contract") is made on the ---------- day of the month of 2020, between, on the one hand, NHIDCL (hereinafter called the "Client") and, on the other hand, M/s____in JV with ____ ---- and in Association with..... (hereinafter called the "Consultants").

WHEREAS

(A) the Client has requested the Consultants to provide certain consulting services as defined in the General Conditions attached to this Contract (hereinafter called the "Services");

(B) the Consultants, having represented to the Client that they have the required professional skills, personnel and technical resources, have agreed to provide the Services on the 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 (hereinafter called "GC");

(b) The Special Conditions of contract (hereinafter called "SC");

(c) The following Appendices:

Appendix A: Terms of reference containing, inter-alia, the Description of the Services and Reporting Requirements

Appendix B: Consultants' Sub consultants, Key Personnel and Sub Professional Personnel, Task assignment, work programme, manning schedule, qualification requirements of key personnel, and schedule for submission of various report.

Appendix C: Hours of work for Consultants'

Personnel Appendix D: Duties of the Client

Appendix E: Cost Estimate

Appendix F: Minutes of Financial/ Contract Negotiations with the Consultant

Appendix G: Copy of letter of invitation

Appendix H: Copy of letter of acceptance

Appendix I: Copy of Bank Guarantee for Performance

Security Appendix-J: Minutes of the pre-bid meeting

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

(a) The Consultants shall carry out the Services in accordance with the provisions of the Contract; and

(b) Client shall make payments to the Consultants in accordance with the provisions of the Contract.

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

FOR AND ON BEHALF OF

NHIDCL

By

Authorized Representative

Witness

1. Signature Name Address

2. Signature Name Address

FOR AND ON BEHALF OF

(Consultant)

By
Authorised Representative

Witness

1. Signature Name Address

2. Signature Name Address

# GENERAL CONDITIONS OF CONTRACT

# GENERAL CONDITIONS OF CONTRACT

## 1. GENERAL PROVISIONS

### 1.1 Definitions

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

**(a)** "Applicable Law means the laws and any other instruments having the force of law in the Government's country as they may be issued and in force from time totime;

**(b)** "Contract" means the Contract signed by the Parties, to which these General Conditions of Contract are attached, together with all the documents listed in Clause 1 of such signed Contract;

**(c)** "Effective Date" means the date on which this Contract comes into force and effect pursuant to Clause GC 2.1;

**(d)** "foreign currency" means any currency other than the currency of the Government; (d) "GC" means these General Conditions of Contract;

(f) "Government" means the Government of India;

(g) "local currency" means the currency of the Government;

(h) "Member", in case the Consultants consist of a joint venture or consortium of more than one entity, means any of these entities, and "Members" means all of these entities;

(i) "Personnel" means persons hired by the Consultants or by any Sub consultant as employees and assigned to the performance of the Services or any part thereof; "foreign Personnel" means such persons who at the time of being so hired had their domicile outside India; and "local Personnel" means such persons who at the time of being so hired had their domicile inside India;

(j) "Party" means the Client or the Consultants, as the case may be, and Parties means both ofthem;

(k) "Services" means the work to be performed by the Consultants pursuant to this Contract for the purposes of the Project, as described in Appendix A hereto;

(l) "SC" means the Special Conditions of Contract by which these General Conditions of Contract may be amended or supplemented;

(m) "Sub consultant" means any entity to which the Consultants subcontract any part of theServices in accordance with the provisions of Clause GC 3.7; and

(n) "Third Party" means any person or entity other than the Government, the Client, the Consultants or a Sub consultant.

## 1.2 Relation between the Parties

Nothing contained herein shall be construed as establishing a relation of master and servant or of agent and principal as between the Client and the Consultants. The Consultants, subject to this Contract, have complete charge of Personnel performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.

## 1.3 Governing Law and Jurisdiction

This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Laws of India and the Courts at Delhi have exclusive jurisdiction over matters arising out of or relating to this Agreement.

## 1.4 Language

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

## 1.5 Table of Contents and Headings

The table of contents, headings or sub-headings in this agreement are for convenience for reference only and shall not be used in, and shall not limit, alter or affect the construction and interpretation of this Contract.

## 1.6 Notices

*1.6.1* *Any 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 in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, facsimile or e-mail to such Party at the address specified in the SC.*

*1.6.2* Notice will be deemed to be effective as specified in the SC.

*1.6.3* A party may change its address for notice hereunder by giving the other Party notice of such change pursuant to the provisions listed in the SC with respect to Clause GC 1.6.2.

## 1.7 Location

The Services shall be performed at such locations as are specified in **Letter of Acceptance(Appendix-I)** hereto and, where the location of a particular task is not so specified, at such locations, whether in India or elsewhere, as the Client may approve.

## 1.8 Authority of Member in Charge

In case the Consultants consist of a joint venture of more than one entity, with or without an Associate the Members hereby authorize the entity specified in the SC to act on their behalf in exercising all the

Consultants' rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments from the Client.

### 1.9 Authorized Representatives

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 Consultants may be taken or executed by the officials specified in the SC.

### 1.10 Taxes and Duties

Unless otherwise specified in the SC, the Consultants shall pay all such taxes, duties, fees and other impositions as may be levied under the Applicable Law.

## 2. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF CONTRACT

### 2.1 Effectiveness of Contract

This Contract shall come into force and effect on the date of the Client's notice to the Consultants instructing the Consultants to begin carrying out the Services. This notice shall confirm that the effectiveness conditions, if any, listed in the SC have been met.

### 2.2 Termination of Contract for Failure to Become Effective

If this Contract has not become effective within such time period after the date of the Contract signed by the Parties as shall be specified in the SC, either Party may, by not less than four (4) weeks' written notice to the other Party, declare this Contract to be null and void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party with respect hereto.

### 2.3 Commencement of Services

The Consultants shall begin carrying out the Services at the end of such time period after the Effective Date as shall be specified in the SC.

### 2.4 Expiration of Contract

Unless terminated earlier pursuant to Clause GC 2.9 hereof, this Contract shall expire when services have been completed and all payments have been made at the end of such time period after the Effective Date as shall be specified in the SC.

### 2.5 Entire Agreement

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.

## 2.6 Modification

Modification of the terms and conditions of this Contract, including any modification of the scope of the Services, may only be made by written agreement between the Parties. Pursuant to Clause GC 7.2 hereof, however, each party shall give due consideration to any proposals for modification made by the other Party.

## 2.7 Force Majeure

### 2.7.1 Definition

(a) For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party, and which makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies.

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

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

### 2.7.2 No Breach of Contract

The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majuere, 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.

### 2.7.3 Measures to be Taken

(a) A party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfill its obligations hereunder with a minimum ofdelay.

(b) A party affected by an event of Force Majuere shall notify the other Party of such event as soon as possible, and in any event 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 notice of the restoration of normal conditions as soon as possible.

(c) The Parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

### 2.7.4 Extension of Time

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.

### 2.7.5 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultants shall be entitled to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Services after the end of such period.

### 2.7.6 Consultation

Not later than thirty (30) days after the Consultants, as the result of an event of Force Majeure, have become unable to perform a material portion of the Services, the Parties shall consult with each other with a view to agreeing on appropriate measures to be taken in the circumstances.

## 2.8 Suspension

The Client may, by written notice of suspension to the Consultants, suspend all payments to the Consultants hereunder if the Consultants fail to perform any of their 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 Consultants to remedy such failure within a period not exceeding thirty (30) days after receipt by the Consultants of such notice of suspension.

## 2.9 Termination

### 2.9.1 By the Client

The Client may, by not less than thirty (30) days' written notice of termination to the Consultants (except in the event listed in paragraph (f) below, for which there shall be a written notice of not less than sixty (60) days), such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (f) of this Clause2.9.1, terminate this Contract:

(a) if the Consultants fail to remedy a failure in the performance of their obligations are under, as specified in a notice of suspension pursuant to Clause 2.8 hereinabove, within thirty (30) days of receipt of such notice of suspension or within such further period as the Client may have subsequently approved in writing;

(b) if the Consultants become (or, if the Consultants consist of more than one entity, if any of their 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 Consultants fail to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 8 hereof;

(d) if the Consultants submit to the Client a statement which has a material effect on the rights, obligations or interests of the Client and which the Consultants know to be false;

(e) if, as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days; or

(f) if the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.

**2.9.2 By the Consultants**

The Consultants may, by not less than thirty (30) day's written notice to the Client, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause 2.9.2, terminate this Contract:

(a) if the Client fails to pay any money due to the Consultants pursuant to this contract and not subject to dispute pursuant to Clause 8 hereof within forty-five (45) days after receiving written notice from the Consultants that such payment is overdue;

(b) 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 Consultants may have subsequently approved in writing) following the receipt by the Client of the Consultants' notice specifying such breach;

(c) if, as the result of Force Majeure, the Consultant are unable to perform a material portion of the Services for a period of not less than sixty (60) days; or

(d) if the Client fails to comply with any final decision reached as a result of arbitration pursuant to Clause 8 hereof.

**2.9.3 Cessation of Rights and Obligations**

Upon termination of this Contract pursuant to Clauses 2.2 or 2.9 hereof, or upon expiration of this Contract pursuant to Clause 2.4 hereof, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Clause 3.3 hereof,
(ii) the Consultant's obligation to permit inspection, copying and auditing of their accounts and records set forth in Clause 3.6 (ii) hereof, and (iv) any right which a Party may have under the Applicable Law.

### 2.9.4 Cessation of Services

Upon termination of this Contract by notice of either Party to the other pursuant to Clauses 2.9.1 or 2.9.2 hereof, the Consultants shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultants and equipment and materials furnished by the Client, the Consultants shall proceed as provided, respectively, by Clauses 3.9 or 3.10 hereof.

### 2.9.5 Payment upon Termination

Upon termination of this Contract pursuant to Clauses 2.9.1 or 2.9.2 hereof, the Client shall make the following payments to the Consultants (after offsetting against these payments any amount that may be due from the Consultant to the Client):

(i) remuneration pursuant to Clause 6 hereof for Services satisfactorily performed prior to the effective date of termination.

(ii) reimbursable expenditures pursuant to Clause 6 hereof for expenditures actually incurred prior to the effective date of termination; and

(iii) except in the case of termination pursuant to paragraphs (a) through (d) of Clause 2.9.1 hereof, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract including the cost of the return travel of the Consultants' personnel and their eligible dependents.

### 2.9.6 Disputes about Events of Termination

If either Party disputes whether an event specified in paragraphs (a) through (e) of Clause 2.9.1 or in Clause 2.9.2 hereof has occurred, such Party may, within forty-five(45) days after receipt of notice of termination from the other Party, refer the matter to arbitration pursuant to Clause 8 hereof, and this Contract shall not be terminated on account of such event except in accordance with the terms of any resulting arbitral award.

## 3. OBLIGATIONS OF THE CONSULTANTS

### 3.1 General

3.1.1 Standard of Performance

The Consultants shall perform the Services and carry out their obligations here under with all due diligence, efficiency and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe and effective equipment, machinery, materials and methods. The Consultants shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers 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.

### 3.1.2 Law Governing Services

The Consultants shall perform the Services in accordance with the Applicable Law and shall take all practicable steps to ensure that any Sub consultants, as well as the Personnel and agents of the Consultants and any Sub consultants, comply with the Applicable Law. The Client shall advise the Consultants in writing of relevant local customs and the Consultants shall, after such notifications, respect such customs.

## 3.2 Conflict of Interests

### 3.2.1 Consultants not to Benefit from Commissions, Discounts, etc.

The remuneration of the Consultants pursuant to Clause 6 hereof shall constitute the Consultants' sole remuneration in connection with this Contract or the Services and the Consultants shall not accept for their own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or to the Services or in the Discharge of their obligations hereunder, and the Consultants shall use their best efforts to ensure that any Sub consultants, as well as the Personnel and agents of either of them, similarly shall not receive any such additional remuneration.

### 3.2.2 Consultants and Affiliates not to be otherwise interested in Project

The Consultants agree that, during the term of this Contract and after its termination, the Consultants and any entity affiliated with the Consultants, as well as any Sub consultant and any entity affiliated with such Sub consultant, shall be disqualified from providing goods, works or services (other than the Services and any continuation thereof) for any project resulting from or closely related to the Services.

### 3.2.3 Prohibition of Conflicting Activities

Neither the Consultants nor their Sub consultants nor the Personnel of either of them shall engage, either directly or indirectly, in any of the following activities:

(a) during the term of this Contract, any business or professional activities in the Government's country which would conflict with the activities assigned to them under this Contract; or

(b) after the termination of this Contract, such other activities as may be specified in the SC.

## 3.3 Confidentiality

The Consultants, their Sub consultants and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relation to the Project, the Services, this Contract or the Client's business or operations without the prior written consent of the Client.

### 3.4 Liability of the Consultants

Subject to additional provisions, if any, set forth in the SC, the Consultants' liability under this Contract shall be as provided by the Applicable Law.

### 3.5 Insurance to be taken out by the Consultants

The Consultants (i) shall take out and maintain, and shall cause any Sub consultants to take out and maintain, at their (or the Sub consultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverage, as shall be specified in the Special Conditions (SC), 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.

### 3.6 Accounting, Inspection and Auditing

The Consultants (i) shall keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify all relevant time charges and cost, and the bases thereof (including the bases of the Consultants' costs and charges), and (ii) shall permit the Client or its designated representative periodically, and up to one year from the expiration or termination of this Contact, to inspect the same and make copies thereof as well as to have them audited by auditors appointed by the Client.

### 3.7 Consultants' Actions requiring Client's prior Approval

The Consultants shall obtain the Client's prior approval in writing before taking any of the following actions:

**(a)** appointing such members of the Personnel as are listed in Appendix B;

**(b)** entering into a subcontract for the performance of any part of the Services, it being understood (i)that the selection of the Sub-consultant and the terms and conditions of the subcontract shall have been approved in writing by the Client prior to the execution of the subcontract, and (ii) that the Consultants shall remain fully liable for the performance of the Services by the Sub- consultant and its Personnel pursuant to this Contract;

**(c)** any other action that may be specified in the SC.

### 3.8 Reporting Obligations

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

### 3.9 Documents prepared by the Consultants to be the Property of the Client

All plans, drawings, specifications, designs, reports and other documents prepared by the Consultants in performing the Services shall become and remain the property of the Client, and the Consultants shall, not

later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof. The Consultants may retain a copy of such documents. Restrictions about the future use of these documents, shall be as specified in the SC.

### 3.10 Equipment and Materials furnished by the Client

Equipment and materials made available to the Consultants by the Client, or purchased by the Consultants 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 Consultants shall make available to the Client an inventory of such equipment and materials and shall dispose of such equipment and materials in accordance with the Client's I instructions. While in possession of such equipment and materials, the Consultants, unless otherwise instructed by the Client in writing, shall insure them in an amount equal to their full replacement value.

## 4. CONSULTANTS' PERSONNEL

### 4.1 General

The Consultants shall employ and provide such qualified and experienced Personnel as are required to carry out the Services.

### 4.2 Description of Personnel

**(a)** The titles, agreed job descriptions, minimum qualification and estimated periods of engagement in the carrying out of the Services of each of the Consultants' Key Professional / Sub- consultants/ Sub Professional Personnel are described in Appendix B.

**(b)** If required to comply with the provisions of Clause 3.1.1 of this Contract, adjustments with respect to the estimated periods of engagement of Key Professional / Sub Professional Personnel set forth in Appendix B may be made by the Consultants by written notice to the Client, provided

(i) that such adjustments shall not alter the originally estimated period of engagement of any individual by more than 10% or one week, whichever is larger, and

(ii) that the aggregate of such adjustments shall not cause payments under this Contract to exceed the ceilings set forth in Clause 6.1 (b) of this Contract. Any other such adjustments shall only be made with the Client's written approval.

**(c)** If additional work is required beyond the scope of the Services specified in Appendix A, the estimated periods of engagement of Key Personnel set forth in Appendix B may be increased by agreement in writing between the Client and the Consultants.

### 4.3 Approval of Personnel

The Key Personnel, Sub-professionals and Sub consultants listed by title as well as by name in Appendix B are hereby approved by the Client. In respect of other Key Personnel which the Consultants propose to

use in the carrying out of the Services, the Consultants shall submit to the Client for review and approval a copy of their biographical data. If the Client does not object in writing (stating the reasons for the objection) within twenty-one (21) calendar days from the date of receipt of such biographical data, such Key Personnel shall be deemed to have been approved by the Client.

**4.4 Working Hours, Overtime, Leave, etc.**

**(a)** Working hours and holidays for Key Professional / Sub Professional Personnel are set forth in Appendix C hereto. To account for travel time, foreign Personnel carrying out Services inside the Government's country shall be deemed to have commenced (or finished) work in respect of the Services such number of days before their arrival in (or after their departure from) the Government's country as is specified in Appendix C hereto.

**(b)** The Key Professional / Sub Professional Personnel shall not be entitled to be paid for overtime nor to take paid sick leave or vacation leave except as specified in Appendix C hereto, and except as specified in such Appendix, the Consultants' remuneration shall be deemed to cover these items. All leave to be allowed to the Personnel is included in the staff- months of service set for in Appendix B. Any taking of leave by Personnel shall be subject to the prior approval of the Client by the Consultants, who shall ensure that absence for leave purposes will not delay the progress and adequate supervision of the Services.

**4.5 Removal and/or Replacement of Personnel**

Removal and/or replacement of Personnel shall be regulated as under:

**4.5.1** In case notice to commence services pursuant to Clause 2.1 of this Contract is not ordered by Client on grounds, e.g., selection on some other assignment, health problem developed after contract negotiation, etc. In such a case no penalty shall be levied on the Firm or on the person concerned. The firm shall however be asked to give a replacement by an equal or better scoring person, whenever mobilization is ordered.

**4.5.2** In case notice to commence services is given within 120 days of negotiations the replacement shall be as below:

a. Replacement up to 33%: Replacement shall be by an equal or better scoring person.

Reduction in remunerations for the balance period shall be @ 5% of the monthly rate.

b. Replacement of more than 33% and up to 50%: Replacement shall be by an equal or better scoring person. Reduction in remunerations for the balance period shall be @ 10% of the monthly rate.

c. Replacement beyond 50% and up to 66%. Replacement shall be by an equal or better scoring person. Reduction in remunerations for the balance period shall be @ 15% of the monthly rate.

d. Replacement beyond 66 % shall normally not be considered. However in exceptional circumstances, where it becomes absolutely essential the remunerations of the substitute shall be reduced by 50 % of the original person replaced. Replacement shall be by an equal or better scoring person, The Department may initiate action for termination/debarment of such consultant for future projects of NHIDCL for a period of 6 months to 24 months depending upon the severity of case.

**4.5.3** Replacement after original contract period is over:

There shall be no limit on the replacements and no reduction in remunerations shall be made. The replacement shall however be of equal or better score.

**4.5.4** If the Employer (i) finds that any of the Personnel has committed serious misconduct or has been charged with having committed a criminal action or (ii) has reasonable ground to be dissatisfied with the performance of any of the Personnel, then the consultant shall, at the Employer's written request specifying the grounds therefore, forthwith provide a replacement with qualifications and experience acceptable to him.

**4.5.5** If the team leader or any other key personnel/ specialist considered pivotal to the project is replaced, the substitute may be interviewed by NHIDCL to assess their merit and suitability.

**4.5.6** If any member of the approved team of a consultant engaged by NHIDCL leaves that consultant before completion of the job, he shall be barred for a period of 6 months to 24 months from being engaged as a team member of any other consultant working (or to be appointed) for any other NHIDCL projects.

**4.5.7** In exceptional situations where the replacement with equivalent or better qualification is not available, replacement with lower qualifications than the originally approved may be accepted with reduction in remuneration as per the procedure prescribed below. This kind of relaxation shall however, be limited to replacement of 2 key personnel only in one consultancy contract package.

i) The new proposed personnel as a replacement has to be evaluated as per the criteria fixed at the time of evaluation of original proposal and marks/rating and then:

- If the original personnel (included in the original proposal based on which the contract was awarded) is to be replaced at the instruction of NHIDCL and the new proposed personnel is having less qualification/ experience i.e marks/rating (but fulfilling the minimum requirement as per TOR), his remuneration would be reduced by 15% over and above the stipulated conditions in the contract because of less qualified personnel

- If the original personnel (included in Contract Agreement) is to be replaced by the Consulting firm and the new proposed personnel is having less qualification/ experience (marks/rating), then his remuneration would be decreased proportionally in comparison to the marks of the original personnel. This will also take into account the contract condition

and if the proposed reduction is less than that stipulated in contract condition, it would be as per the contract provision.

It will be ensured that the new proposed personnel should score at least 75% of the marks of the originally approved key personnel. Both the Consulting firm and the proposed personnel should give the undertaking in the format available in Form VII of Appendix II along with the replacement CV.

ii) The CV should be signed by personnel and the consulting firm in every page. If the CV is found incorrect at later date, the personnel accepted would be removed from the assignment and debarred from further NHIDCL works for an appropriate period to be decided by NHIDCL and the new proposed personnel in place of removed personnel would be paid 15% less salary than the original personnel. 15% reduction in the salary will be imposed as penalty for submitting the incorrect information. This penalty will be imposed only once. If the same consulting firm submits incorrect information again second time, necessary action will be taken by NHIDCL to blacklist the firm.

**4.6 Resident Project Manager**

If required by the SC, the Consultants shall ensure that at all times during the Consultants' performance of the Services in the Government's country a resident project manager, acceptable to the Client, shall take charge of the performance of such Services.

## 5. OBLIGATION OF THE CLIENT

**5.1** Assistance and Exemptions

Unless otherwise specified in the SC, the Client shall use its best efforts to ensure that the Government shall:

**(a)** provide the Consultants, Sub consultants and Personnel with work permits and such other documents as shall be necessary to enable the Consultants, Sub consultants or Personnel to perform the Services;

**(b)** assist for the Personnel and, if appropriate, their eligible dependents to be provided promptlywith all supporting papers for necessary entry and exit visas, residence permits, exchange permits and any other documents required for their stay in India;

**(c)** facilitate prompt clearance through customs of any property required for the Services;

**(d)** issue to officials, agents and representatives of the Government all such instructions as may be necessary or appropriate for the prompt and effective implementation of the Services;

**5.2 Access to Land**

The Client warrants that the Consultants shall have, free of charge, unimpeded access to all land in the Government's country in respect of which access is required for the performance of the Services. The Client will be responsible for any damage to such land or any property thereon resulting from such access and will indemnify the Consultants and each of the Personnel in respect of liability for any such damage, unless such damage is caused by the default or negligence of the Consultants or any Sub consultants orthe Personnel of either of them.

**5.3 Change in the Applicable Law**

If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost or reimbursable expenses incurred by the Consultants in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultants under this Contract shall be increased or decreased accordingly by agreement between the Parties hereto, and corresponding adjustments shall be made to the ceiling amounts specified in Clause 6.1(b),

**5.4 Services, Facilities and Property of the Client**

The client shall make available to the Consultants and the Personnel, for the purposes of the Services and free of any charge, the services, facilities and property described in Appendix D at the times and in the manner specified in said Appendix D, provided that if such services, facilities and property shall not be made available to the Consultants as and when so specified, the Parties shall agree on (i) any time extension that may be appropriate to grant to the Consultants for the performance of the Services,
(ii) the manner in which the Consultants shall procure any such services, facilities and property from other sources, and (iii) the additional payments, if any, to be made to the Consultants as a result thereof pursuant to Clause 6.1(c) hereinafter.

**5.5 Payment**

In consideration of the Services performed by the Consultants under this Contract, the Client shall make to the Consultants such payments and in such manner as is provided by Clause 6 of this Contract.

**6. PAYMENT TO THE CONSULTANTS**

**6.1 Cost Estimates; Ceiling Amount**

**(a)** An abstract of the cost of the Services payable in **local currency (Indian Rupees)** is set forth in **Appendix E.**

**(b)** Except as may be otherwise agreed under Clause 2.6 and subject to Clause 6.1(c), the payments under this Contract shall not exceed the ceiling specified in the SC. The Consultants shall notify the Client as soon as cumulative charges incurred for the Services have reached 80% of the ceiling.

(c) Notwithstanding Clause 6.1(b) hereof, if pursuant to Clauses 5.4 hereof, the Parties shall agree that additional payments shall be made to the Consultants in order to cover any necessary additional expenditures not envisaged in the cost estimates referred to in Clause 6.1(a) above, the ceiling set forth in Clause 6.1(b) above shall be increased by the amount or amounts, as the case may be, of any such additional payments.

**6.2 Currency of Payment**

(a) The payment shall be made in Indian Rupees.

**6.3 Mode of Billing and Payment**

Billing and payments in respect of the Services shall be made as follows:-

(a) The Client shall cause to be paid to the Consultants an advance payment as specified in the SC, and as otherwise set forth below. The advance payment will be due after provision by the Consultants to the Client of a bank guarantee by a bank acceptable to the Client in an amount (or amounts) and in a currency (or currencies) specified in the SC, such bank guarantee (i) to remain effective until the advance payment has been fully set off as provided in the SC, and **ii) in such form as the Client shall have approved in writing.**

(b) Payment **Schedule**

The Consultant will be paid stage-wise as a percentage of the contract value as perthe schedule given below:

| S.No. | Milestone | Timeline (in weeks) commencement* | Payment as % of contract value |
|---|---|---|---|
| 1. | Inception Report including proposed connectivity for external trunk infrastructure | D + 15 | 5% |
| 2. | Trunk infrastructure gap assessment with draft market overview report for finalisation and approval of suitable site for MMLP<br>ii) Comments of client | D + 30<br>D + 40 | 10% |
| 3. | (a) Submission of alternatives for concept Master plan and engineering designs and plans for the selected site and detailed Master plan options for MMLP with preliminary financial case assessment<br>ii) Comments of client | D + 60<br>D + 70 | 10% |
| 4. | Finalization of Master plan and Basic Architecture design (2D and 3D) and plans after incorporating client's comments and relevant stakeholders | D + 80 | 10% |
| 5. | i) Draft Feasibility Study Report for MMLP including IWT, External Road & Rail Trunk Connectivity Infrastructure, EIA report, EMP and Social Impact Assessment (SIA) report detailed Economic Analysis, Financial Feasibility and Project Structuring aspects etc.<br>ii) Comments of client | D + 90<br>D + 100 | 15% |

| | | | |
|---|---|---|---|
| 6. | Final Feasibility Study Report for MMLP including IWT, External Road & Rail Trunk Connectivity Infrastructure, after incorporating comments and observations of NHIDCL and other competent authorities including submission of bid documents including Draft Concession Agreement and technical schedule for selection of developing agency. Submission of physical 3D model and simulation graphic video with voice over. | D + 110 | 15% |
| 7. | i) Draft Detailed Project Report MMLP for IWT, External Road & Rail Trunk Connectivity Infrastructure and including submission of bid document including draft CA and TS for selection of developing Agency<br>(a) Submission of all statutory documents for clearances related to Land Acquisition such as 3a, 3A, 3D and 3G notifications, forest clearance stage 1 and draft environment impact assessment report (EIA) clearance, Social Impact Assessment (SIA) and documents related to other clearances required<br>(b) Assessment of shifting of utilities required and providing IWT, road and rail connectivity with requisite land parcel<br>ii) Comments of client | D + 130<br><br>D + 140 | 10% |
| 8. | Final Detailed Project Report for MMLP including submission of bid documents including draft CA and TS for selection of developing Agency | D + 150 | 10% |
| 9. | Obtaining EIA clearance, Stage 1 Forest clearance and obtaining other final statutory clearances;<br>3G notification related to land acquisition as per LA Act.<br>Obtaining final estimated for utility shifting and requisite utilities required for Multi-modal Logistics Parks from the concerned agencies and submission to client | D + 180 | 10% |
| 10. | Satisfactory assisting NHIDCL including pre-bid meeting, preparing replies to pre-bid meetings and other clarifications sought during course of procurement of Concessionaire/Contractor. | - | 5% |

Note: *Start date shall be date of Commencement of Services as follows:

(i) D: Date of issuance of LOA & its acceptance by the Consultant.

(ii) NHIDCL at its discretion can foreclose the Contract after completion of Feasibility Report.

(iii) Depending upon the viability and other administrative reasons, authority may or may not continue with the preparation of Detailed Project report for development of Multi Modal Logistics Park at Udaipur in the State of Tripura.

(iv) Consultants have to provide a certificate that all key personnel as envisaged in the Contract Agreement have been actually deployed in the project. They have to submit this certificate at the time of submission of bills to NHIDCL from time to time.

**(c)** No payment shall become eligible for the next stage till the consultant completes to the satisfaction of the client the work pertaining to the preceding stage. The payment for the work of sub-soil investigation (Boring) will be as per plan approved by the client and will be paid as per actual at the rates quoted by the consultants .The payment for the quantity given by the client for boring will be deemed to be included in the above mentioned payment schedule. Any adjustment in the payment to the consultants will be made in the final payment only.

**(d)** The Client shall cause the payment of the Consultants in Para 6.4 (b) above as given in schedule of payment within thirty (30) days after the receipt by the Client of bills. Interests at the rate specified in the SC shall become payable as from the above due date on any amount due by, but not paid on, such due date.

**(e)** The final payment under this Clause shall be made only after the final report and a final statement, identified as such, shall have been submitted by the Consultants and approved as satisfactory by the Client. The Services shall be deemed completed and finally accepted by the Client and the final report and final statement shall be deemed approved by the Client as satisfactory one hundred and eighty (180) calendar days after receipt of the final report and final statement by the Client unless the Client, within ninety (90) day period, gives written notice to the Consultants specifying in detailed deficiencies in the Services, the final report or final statement. The Consultants shall thereupon promptly make any necessary corrections, and upon completion of such corrections, the foregoing process shall be repeated. Any amount which the Client has paid or caused to be paid in accordance with this Clause in excess of the amounts actually payable in accordance with the provisions of this Contract shall be reimbursed by the Consultants to the Client within thirty (30) days after receipt by the Consultants of notice thereof. Any such claim by the Client for reimbursement must be made within twelve (12) calendar months after receipt by the Client of a final report and a final statement approved by the Client in accordance with the above.

**(f)** All payments under this Contract shall be made to the account of the Consultants specified in the SC.

## 7. Responsibility for Accuracy of Project Documents

### 7.1 General

7.1.1 The Consultant shall be responsible for accuracy of the data collected, by him directly or procured from other agencies/authorities, the designs, drawings, estimates and all other details prepared by him as part of these services. He shall indemnify the Authority against any inaccuracy in the work which might surface during implementation of the project. The Consultant will also be responsible for correcting, at his own cost and risk, the drawings including any re-survey / investigations and correcting layout etc. if required during the execution of the Services.

7.1.3 The survey control points established by the Consultant shall be protected by the Consultants till the completion of the Consultancy Services.

**7.2. Retention Money**

An amount equivalent to 10% of the contract value shall be retained at the end of the contract for accuracy of design and quantities submitted and the same will be released after the completion of civil contract works or after 3 years from completion of consultancy services, whichever is earlier. The retention money will however be released by the Client on substitution by Bank Guarantee of the same amount valid up to the period as above.

**7.3. Penalty for delay**

In case of delay in completion of services, a penalty equal to 0.05% of the contract price per day subject to a maximum 5% of the contract value will be imposed and shall be recovered from payments due/performance security. Howeverin case of delay due to reasons beyond the control of the consultant, suitable extension of time will be granted.

7.3.1 Total amount of recovery from all penalties shall be limited to 10% of the ConsultancyFee.

**7.4 ACTION FOR DEFICIENCY IN SERVICES**

**7.4.1 Consultants liability towards the Client**

Consultant shall be liable to indemnify the client for any direct loss or damage accrued or likely to accrue due to deficiency in service rendered by him.

**7.4.2 Warning / Debarring**

In addition to the penalty as mentioned in para 7.3, warning may be issued to the erring consultants for minor deficiencies. In the case of major deficiencies in the Detailed Project Report involving time and cost overrun and adverse effect on reputation of NHIDCL, other penal action including debarring for certain period may also be initiated as per policy of NHIDCL.

**8. FAIRNESS AND GOOD FAITH**

**8.1 Good Faith**

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

**8.2 Operation of the Contract**

The Parties recognize that it is impractical in this Contract to provide for every contingency which may arise during the life of the Contract, and the Parties hereby agree that it is their intention that this Contract shall operate fairly as between them, and without detriment to the interest of either of them, and that, if during the term of this Contract either Party believes that this Contract is operating unfairly, the Parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but no failure to agree on any action pursuant to this Clause shall give rise to a dispute subject to arbitration in accordance with Clause 9 hereof.

## 9. SETTLEMENT OF DISPUTES

### 9.1 Amicable Settlement

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or the interpretation thereof.

### 9.2 Dispute Settlement

Any dispute between the Parties as to matters arising pursuant to this Contract which cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be submitted by either Party for settlement in accordance with the provisions specified in the SC.

## SPECIAL CONDITIONS OF CONTRACT

**Number of**

GC Clause

**A. Amendments of, and Supplements to, Clauses in the General Conditions**

1.1(a) The words "**in the Government's country"** are amended to read "**in INDIA"**

1.4 The language is: **English**

1.6.1 The addresses are:

**For the Client : <NHIDCL, Address>**

**Attention : <NHIDCL, Address>**

……. Ext.-…..; Fax: 011-…….

E-mail: <Email>

**For the Consultants**:

**Attention: Name**
**Designation**
**Address**
**Tel: Fax: E-mail address**

1.6.2 Notice will be deemed to be effective as follows:

(a) in the case of personal delivery or registered mail, on delivery;
(b) In the case of facsimiles, 24 hours following confirmed transmission.
(c) In case of E mail, 24 hours following confirmed transmission.

1.8 Entity to Act as Member in charge (In case of Joint Venture of Consultants) with or without an Associate:

**- ……..**

1.9 The Authorized Representatives are:

**For the Client : ( -- )**
Director, NHIDCL ( -- )

For the Consultant: Name
Designation

1.10 The Consultants and the personnel shall pay the taxes, duties, fees, levies and other impositions levied under the existing, amended or enacted laws (prevailing 7 days before the last date of submission of bids) during life of this contract and the Client shall perform such

duties in regard to the deduction of such tax as may be lawfully imposed.

**2.1 The effectiveness conditions are the following:**

a) The LOA has been issued by NHIDCL.

b) The consultant will furnish within 15 days of the issue of Letter of Acceptance an unconditional Bank Guarantee equivalent to 10**% of the total contract value** from a nationalized bank IDBI or ICICI/ICICI Bank/ Foreign Bank/EXIM Bank/Any Scheduled Commercial Bank approved by RBI having a net worth of not less than Rs. 1000 Crores as per latest Annual Report pof the Bank amongst the list of Banks avaialbe at NHIDCL website (HTTPs://nhidcl.com) only. **The Authority reserves the right to add or remove any of names bank on which BG shall be accepted based on advisories from the Govt./RBI. The BGs issued by 'Foreign Banks' and Banks not mentioned in the given list shall not be accepted.** In case of JV, the BG shall be furnished on behalf of the JV or by the lead member of the JVs for an amount equivalent to 10% of the total contract value towards Performance Security valid for a period of three years beyond the date of completion of services, or end of civil works contract, whichever is earlier. **The Bank Guarantee will be released by NHIDCL upon expiry of 3 years beyond the date of completion of services, or end of civil works contract, whichever earlier, provided rectification of errors if any, found during implementation of the contract for civil work and satisfactory report by NHIDCL in this regard is issued. However, if contract is foreclosed / terminated by NHIDCL at Inception Stage, with no fault of Consultant, Performance Security shall be released within three months from date of foreclosure / termination.**

**2.2** The time period shall be "four months" or such other time period as the parties may agree in writing.

**2.3** The time period shall be "fifteendays" or such other time period as the Parties may agree in writing.

**2.4** The time period shall be ------ **months** or such other time period as the parties may agree in writing.

3.4 Limitation of the Consultants' Liability towards the Client

(a) Except in case of negligence or willful misconduct on the part of the Consultants or on the part of any person or firm acting on behalf of the Consultants in carrying out the Services, the Consultants, with respect to damage caused by the Consultants 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 (A) the total payments for Professional

Fees and Reimbursable Expenditure made or expected to be made to the Consultants hereunder, or (B) the proceeds the Consultants may be entitled to receive from any insurance maintained by the Consultants to cover such a liability, whichever of (A) or (B) is higher.

(b) This limitation of liability shall not affect the Consultants' liability, if any, for damage to Third Parties caused by the Consultants or any person or firm acting on behalf of the Consultants in carrying out the Services.

3.5 The risks and the coverage shall be as follows:

(a) Third Party motor vehicle liability insurance as required under Motor Vehicles Act, 1988 in respect of motor vehicles operated in India by the Consultants or their Personnel or any Sub consultants or their Personnel for the period of consultancy.

(b) Third Party liability insurance with a minimum coverage, for Rs. 1.00 million for the period of consultancy.

(c) (i) The Consultant shall provide to NHIDCL Professional Liability Insurance (PLI) for a period of **Five years** beyond completion of Consultancy services or as per Applicable Law, whichever is higher.

(i) The Consultant will maintain at its expense PLI including coverage for errors and omissions caused by Consultant's negligence in the performance of its duties under this agreement,
**(A)** For the amount not exceeding total payments for Professional Fees and Reimbursable Expenditures made or expected to be made to the Consultants hereunder OR **(B)** the proceeds, the Consultants may be entitled to receive from any insurance maintained by the Consultants to cover such a liability, whichever of **(A) or (B) is higher**.

(ii) The policy should be issued only from an Insurance Company operating in India.

(iv) The policy must clearly indicate the limit of indemnity in terms of "Any One Accident" (AOA) and "Aggregate limit on the policy" (AOP) and in no case should be for an amount less than stated in the contract.

(v) If the Consultant enters into an agreement with NHIDCL in a joint venture or 'in association', the policy must be procured and provided to NHIDCL by the joint venture/in association entity and not by the individual partners of the joint venture/ association.

(vi) The contract may include a provision thereby the Consultant does not cancel the policy midterm without the consent of NHIDCL. The insurance company may provide an undertaking in this regard.

(d) Employer's liability and workers' compensation insurance in respect of the Personnel of the Consultants and of any Sub consultant, 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 all insurances and policies should start from the date of commencement of services and remain effective as per relevant requirements of contract agreement.

3.9 The Consultants shall not use these documents for purposes unrelated to this Contract without the prior written approval of the Client.

4.6 The person designated as Team Leader in Appendix B shall serve in that capacity, as specified in Clause 4.6.

6.1 (b) The ceiling amount in local currency is **Rs…… Goods and Services Tax )**

6.3 (a) No advance payment will be made.

6.3 (e) The interest rate is: @ 12% per annum

6.3 (f) **The account is:**

9.2 Disputes shall be settled by arbitration in accordance with the following provisions:

**9.2.1 Selection of Arbitrators**

Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three arbitrators, in accordance with the following provisions:

(a) Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to the President, Indian Roads Congress, New Delhi, for a list of not fewer than five nominees and, on receipt of such list, the Parties shall alternately strike names there from, and the last

remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, the president, Indian Roads Congress, New Delhi, shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute.

(b) Where the Parties do not agree that the dispute concerns a technical matter, the Client and the Consultants shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the later of the two arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by Secretary, the Indian Council of Arbitration, New Delhi.

(c) If, in a dispute subject to Clause SC 9.2.1 (b), one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has named an arbitrator may apply to the Secretary, Indian Council of Arbitration, New Delhi, to appoint a sole arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the sole arbitrator for that dispute.

**9.2.2 Rules of Procedure**

Arbitration proceedings shall be conducted in accordance with procedure of the Arbitration & Conciliation Act 1996, of India unless the Consultant is a foreign national/firm, where arbitration proceedings shall be conducted in accordance with the rules of procedure for arbitration of the United Nations Commission on International Trade Law (UNCITRAL) as in force on the date of this Contract.

**9.2.3 Substitute Arbitrators**

If for any reason an arbitrator is unable to perform his function, a substitute shall be appointed in the same manner as the original arbitrator.

**9.2.4 Qualifications of Arbitrators**

The sole arbitrator or the third arbitrator appointed pursuant to paragraphs (a)through (c) of Clause 9.2.1 hereof shall be an internationally recognized legal or technical expert with extensive experience in relation to the matter in dispute.

**9.2.5 Miscellaneous**

In any arbitration proceeding hereunder:

(a) Proceedings shall, unless otherwise agreed by the Parties, be held in

DELHI

(b) the English language shall be the official language for all purposes; and
[Note: English language may be changed to any other Language, with the agreement of both the Parties.]

(c) the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.

(d) The maximum amount payable per Arbitrator in Arbitration clauses shall be as under

| S. No | Particulars of fee and other charges | Schedule amount payable per Arbitrator/per case |
|---|---|---|
| 1 | **Arbitrator fee** | **Rs 25,000/- per day**<br>**Or**<br>**Rs 7 lakhs (lumpsum) subject to publishing the award within 6 months**<br>**Or**<br>**Rs 5 lakhs (lumpsum) subject to publishing the award after 6 months but before 12 months.**<br>**Note: The amount of fees already paid for the days of hearing @ Rs 25000/- would be adjusted in the lumpsum payment.** |
| 2 | **Reading charges** | **Rs 25,000/- per Arbitrator per case including counter claim.** |
| 3 | **Secretarial Assistance and Incidental charges (telephone, fax, postage etc.)** | **Rs 20,000/-** |
| 4 | **Charges for publishing/declaration of the award** | **Rs 35,000/-** |
| 5 | Other expenses (As per actual against bills subject to maximum of the prescribed celling given below) | |
| | Traveling expenses<br><br>Lodging and Boarding | Economy class (by air), First class AC (by train) and AC Car (by road)<br>a) Rs 15,000/- per day (in metro cities)<br>b) Rs 7,000/- per day (in other cities)<br>c) Rs 3,000/- per day if any Arbitrator makes their own arrangements. |
| 6 | Local travel | Rs 1,500/- per day |
| 7 | Extra charges for days other than hearing/ meeting days (maximum for 2 days) | Rs 5,000/- per day for outstation Arbitrator |
| Note:- | 1. Lodging boarding and traveling expenses shall be allowed only for those members who are residing 100 kms. away from place of meeting.<br>2. Delhi, Mumbai, Chennai, Kolkata, Bangalore and Hyderabad shall be considered as Metro Cities. | |

In exceptional cases, such as cases involving major legal implications/ wider ramifications/ higher financial stakes etc., a special fee structure could be fixed in consultation with the Contractor/ Supervision Consultants and with the specific approval of the NHIDCL before appointment of the Arbitrator,

## Appendix A

Terms of reference containing, inter-alia, the Description of the Services and Reporting Requirements

# Appendix B

Consultants' Sub-consultants, Key Personnel and Sub Professional Personnel

## Appendix C

Hours of work for Consultants' Personnel

The Consultant's personnel shall normally work for 8 hours in a day and six days a week. Normally Sundays shall be closed for working. In addition they shall also be allowed to avail holidays as observed by the Client's office in the relevant state without deduction of remunerations. In case any person is required to work on Sunday or Holiday due to exigency of work, he/she shall be given compensatory leave within the next 15 days.

## Appendix D

Duties of the Client

As per TOR

# Appendix E

Cost Estimate

# Appendix F

Minutes of Financial/ Contract Negotiations with the Consultant

## Appendix G: Copy of letter of invitation

## Appendix H: Copy of letter of acceptance

**Appendix - I**

**Format for Bank Guarantee for Performance Security (For individual work) BANK GUARANTEE FOR PERFORMANCE SECURITY**

To,
<NHIDCL, Address>

In consideration of "NHIDCL" (hereinafter referred as the "Client", which expression shall, unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having awarded to M/s.……having its office at ……..
(Hereinafter referred to as the "Consultant" which expression shall repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns), a contract by issue of client's Contract Agreement no. / Letter of Acceptance No ..... dated
…… and the same having been unequivocally accepted by the Consultant, resulting in a Contract valued at Rs……../- (Rupees…..…….) excluding Goods and Services Tax for "**Consultancy Services for <Project Description>**
**……** in the state of
…….under – Contract Package No. (Hereinafter called the "Contract"), and the Consultant having agreed to furnish a Bank Guarantee to the Client as "Performance Security as stipulated by the Client in the said contract for performance of the above Contract amounting to Rs..... /- (Rupees… .....).

We, ……..having registered office at ..... , a body registered/constituted under the.....(hereinafter referred to as the Bank), which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the client immediately on demand any or, all money payable by the Consultant to the extent of Rs. ……..(Rupees……..……..) as aforesaid at any time up to ..... without any demur, reservation, contest, recourse or protest and/or without any reference to the consultant. Any such demand made by the client on the bank shall be conclusive and binding notwithstanding any difference between the Client and the Consultant or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. We agree that the Guarantee herein contained shall be irrevocable and shall continue to be enforceable till the Client discharges this guarantee.

The Client shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time to vary or to extend the time for performance of the contract by the Consultant. The Client shall have the fullest liberty without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the consultant and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Client and the Consultant any other course or remedy or security available to the Client. The bank shall not be relieved of its obligations under these presents by any exercise by the Client of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Client or any other indulgence shown by the Client or by any other matter or thing whatsoever which under law would but for this provision have the effect of relieving the Bank.

This guarantee shall also be operatable at our….....Branch at New Delhi, from whom, confirmation regarding the issue of this guarantee or extension / renewal thereof shall be made available on demand. In the

contingency of this guarantee being invoked and payment there under claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

The liability of Bank under this Guarantee shall not be affected by any change in the constitution of the consultant or the bank.

The Bank also agrees that the Client at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Consultant and notwithstanding any security or other guarantee that the Client may have in relation to the Consultant's liabilities.

Notwithstanding anything contained herein,

a) Our liability under this Bank Guarantee is limited to Rs. …….(Rupees .....) and it shall remain in force up to and including ……and shall be extended from time to time for such period as may be desired by M/s… ....., on whose behalf this guarantee has been given.

b) This Bank Guarantee shall be valid up to ……..

c) We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before ..... (date of expiry of Guarantee).

The guarantor/bank hereby confirms that it is on the SFMS (Structural Finance Messaging System) platform & shall invariably send an advice of this Bank Guarantee to the designated bank of NHIDCL having following details:

| S. No. | Particulars | Details |
|---|---|---|
| 1. | Name of Beneficiary | National Highways and Infrastructure Development Corporation Ltd. |
| 2. | Name of Bank | Syndicate Bank |
| 3. | Account No. | 90621010002659 |
| 4. | IFSC Code | CNRB0019062 |

**NOTE:**

*(i) The bank guarantee(s) contains the name, designation and code number of the officer(s) signing the guarantee(s).*

*(ii) The address, telephone no. and other details of the Head Office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing Branch.*

*(iii) The bank guarantee for Rs. 10,000 and above is signed by at least two officials (or as per the norms prescribed by the RBI in this regard).*

(Signature of the Authorised Official)

(Name & Designation with Bank Stamp)

## Appendix J : Reply to Queries of the Bidder

**Appendix-K**

**Details of Ongoing and Awarded works in NHIDCL**

**Details of Ongoing & Awarded (for which LOA has been issued) works in NHIDCL (Ref Clause 1.11 of LOI of RFP)**

| Sl. No. | Name of the work | Contract Price (Rs. Cr.) | Appointed Date | Original Scheduled completion date | Progress as on Date | Likely date of Completion | Remarks, if any |
|---|---|---|---|---|---|---|---|
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| … …. | | | | | | | |

I/We certify that all the information furnished above is true in all respects.

Name of the Bidder:
Signature of the Authorized Signatory:
Name of the Authorized Signatory:
Date:
Place:

**APPENDIX- L**

# INTEGRITY PACT

(To be executed on plain paper and submitted along with Technical Bid/Tender documents. To be signed by the bidder and same signatory competent/ authorized to sign the relevant contract on behalf of the NHIDCL)

This integrity Pact is made at_____on this_____day of____2016. **BETWEEN**
**[President of India through Ministry of Road Transport & Highways, Government of India** represented by Director General (Road Development) & Special Secretary, Transport Bhawan, 1-Parliament Street New Delhi-110001], (hereinafter referred to as the **"Principal/Owner"** which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns)

**AND**

*{Name and address of the Firm/Company}*, (hereinafter referred to as "The Bidder(s)/Contractor(s)/Concessionaire(s)/Consultant(s)" and which expression shall unless repugnant to be meaning or context thereof include its successors and permitted assigns.)

**Preamble**

Whereas, the Principal has floated the Tender {*NIT No……dtd }* (hereinafter referred to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract/s for *{Name of the work}* (hereinafter referred to as the "Contract").

And Whereas the Principal values full compliance with all relevant laws of the land, rules of land, regulations, economic use of resources and of fairness/ transparency in its relations with its Bidder(s) and/ or Contractor(s)/Concessionaire(s)/Consultant(s).

And whereas to meet the purpose aforesaid, both the parties have agreed to enter into this Integrity Pact (hereafter referred to as "Integrity Pact" or "Pact") the terms and conditions of which shall also be read as integral part and parcel of the Tender documents and contract between the parties. Now, therefore, in consideration of mutual covenants contained in this pact, the parties hereby agree as follows and this pact witnesses as under:

**Article-1: Commitments of the Principal**

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

(a) No employee of the Principal, personally or through family members, will in connection with the Tender for, or the execution of a Contract, demand, take a promise for or accept, for self, or third person, any material of immaterial benefit which the person is not legally entitled to.

(b) The Principal will, during the Tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

(c) The Principal will exclude all known prejudiced persons from the process, whose conduct in the past has been of biased nature.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act or any other Statutory Acts or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions as per its internal laid down Rules/Regulations.

**Article – 2: Commitments of the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s).**

The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

(a) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

(b) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contract, submission or non submission or bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

(c) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will not commit any offence under the relevant IPC/PC Act and other Statutory Acts; further the Bidder(s)/Contractor(s)/Concessionaire(s)/Consultant(s) will not use improperly, for purposes of completion or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

(d) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) of foreign origin shall disclose the name and address of the Agents/ Representatives in India, if any. Similarly, the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) of Indian Nationality shall furnish the name and address of the foreign principle, if any.

(e) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract. He shall also disclose the details of services agreed upon for such payments.

(f) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

(g) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will not bring any outside influence through any Govt. bodies/quarters directly or indirectly on the bidding process in furtherance of his bid.

**Article - 3 Disqualification from tender process and exclusion from future contracts.**

(1) If the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s), before award or during execution has committed a transgression through a violation of any provision of Article- 2, above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) from the tender process.

(2) If the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) have committed a transgression through a violation of Article-2 such as to put his reliability or credibility into question, the Principal shall be entitled to exclude including blacklist and put on holiday the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) for any future tenders/ contract award process. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the Principal taking into consideration the full facts and circumstances of each case particularly taking into account the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) and the amount of the damage. The exclusion will be imposed for a maximum of 3 years.

(3) A transgression is considered to have occurred if the Principal after due consideration of the available evidence concludes that "On the basis of facts available there are no material doubts".

(4) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) with its free consent and without any influence agrees and undertakes to respect and uphold the Principal's absolute rights to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.

(5) The decision of the Principal to the effect that a breach of the provisions of this Integrity Pact has been committed by the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s)shall be final and binding on the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s), however, the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) can approach IEM(s) appointed for the purpose of this Pact.

(6) On occurrence of any sanctions/ disqualification etc arising out from violation of integrity pact, the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) shall not be entitled for any compensation on this account.

(7) Subject to full satisfaction of the Principal, the exclusion of the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) could be revoked by the Principal if the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s)can prove that he has restored/ recouped the damage caused by him and has installed a suitable corruption prevention system in his organization.

**Article – 4: Compensation for Damages**.

(1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Arcticle-3, the Principal shall be entitled to forfeit the Earnest Money Deposit/ Bid Security or demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security apart from any other legal right that may have accrued to the Principal.

(2) In addition to 1 above, the Principal shall be entitled to take recourse to the relevant provisions of the contract related to Termination of Contract due to Contractor/ Concessionaire/Consultant's Default. In such case, the Principal shall be entitled to forfeit the Performance Bank Guarantee of the Contractor/ Concessionaire/ Consultant and/ or demand and recover liquidated and all damages as per the provisions of the contract/concession agreement against Termination.

**Article – 5: Previous Transgressions**

(1) The Bidder declares that no previous transgressions occurred in the last 3 years immediately before signing of this Integrity Pact with any other Company in any country conforming to the anti corruption/ Transparency International (TI) approach or with any other Public Sector Enterprise/ Undertaking in India or any Government Department in India that could justify his exclusion from the tender process.

(2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action for his exclusion can be taken as mentioned under Article-3 above for transgressions of Article-2 and shall be liable for compensation for damages as per Article-4 above.

**Article – 6: Equal treatment of all Bidders/ Contractors/ Concessionaires/ Consultants/ Subcontractors**

(1) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) undertake(s) to demand from all sub-contractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.

(2) The Principal will enter into agreements with identical conditions as this one with all Bidders/ Contractors/ Concessionaires/ Consultants and subcontractors.

(3) The Principal will disqualify from the tender process all Bidders who do not sign this Pact or violate its provisions.

**Article – 7: Criminal charges against violating Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s)/ Sub-contractor(s).**

If the Principal obtains knowledge of conduct of a Bidder/ Contractor/ Concessionaire/ Consultant or subcontractor, or of an employee or a representative or an associate of a Bidder/ Contractor/ Concessionaire/ Consultant or Subcontractor, which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

**Article- 8: Independent External Monitor (IEM)**

(1) The Principal has appointed **Sh. Subhash Chandra, IAS (Retd.), B-9, Tower-10, New Moti Bagh Complex, New Delhi-110021, Email-id: subhash59@hotmail.com , Tel: +91-9717790920** as Independent External Monitor (herein after referred to as "Monitor") for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

(2) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Director General (Road Development) & Special Secretary.

(3) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s)accepts that the Monitor has the right to access without restriction to all project documentation of the Principal including that provided by the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s). The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s)will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the

information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.

**(4)** The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings**.**

(5) As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

(6) The Monitor will submit a written report to the Director General (Road Development) & Special Secretary within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.

(7) If the Monitor has reported to the Director General (Road Development) & Special Secretary, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Director General (Road Development) & Special Secretary has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.

(8) The word 'Monitor' would include both singular and plural.

**Article – 9 Pact Duration**

This Pact begins when both parties have legally signed it (in case of EPC i.e. for projects funded by Principal and consultancy services). It expires for the Contractor/ Consultant 12 months after his Defect Liability Period is over or 12 months after his last payment under the contract whichever is later and for all other unsuccessful Bidders 6 months after this Contract has been awarded. (In case of BOT Projects) It expires for the concessionaire 24 months after his concession period is over and for all other unsuccessful Bidders 6 months after this Contract has been awarded. If any claim is made/ lodged during his time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by Director General (Road Development) & Special Secretary.

**Article - 10 Other Provisions.**

(1) This pact is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.

(2) Changes and supplements as well as termination notices need to be made in writing.

(3) If the Bidder/Contractor/Concessionaire/Consultant is in a partnership or a Joint Venture partner, this pact must be signed by all partners or JV members.

(4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(5) Any disputes/ differences arising between the parties with regard to term of this pact, any action taken by the Principal in accordance with this Pact or interpretation thereof shall not be subject to any Arbitration.

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

In witness whereof the parties have signed and executed this Pact at the place and date first done mentioned in the presence of following witness:-

| | |
|---|---|
| (For & On behalf of the Principal)<br>(Office Seal ) | (For & On behalf of the Bidder/ Contractor/ Concessionaire/ Consultant ) |

P
l
a
c
e

D
a
t
e

Witness 1: (Name & Address):

Witness 2 : (Name & Address):

*{COUNTERSIGNED and accepted by: JV Partner}*

**APPENDIX-VII**

# DPR Checklist

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Project Appreciation** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Location of site office | Yes ☐ No ☐ NA ☐ | | |
| 2.2 | Review of scope of ToR and gap identification | Yes ☐ No ☐ NA ☐ | NA | |
| 2.3 | Key departments identified for various documents | Yes ☐ No ☐ NA ☐ | | |
| 2.4 | Start and end location of project verified with client (Mention details) | Yes ☐ No ☐ NA ☐ | | |
| 2.5 | Project description<br>• Start and End Chainage<br>• Village/District | Yes ☐ No ☐ NA ☐ | | |
| 2.6 | Project location map<br>• On State Map<br>• On District Map | Yes ☐ No ☐ NA ☐ | NA | |
| 2.7 | Site photos and data of project alignment | Yes ☐ No ☐ NA ☐ | NA | |
| 2.8 | Overview of land use plans | Yes ☐ No ☐ NA ☐ | NA | |
| 2.9 | Overview of existing pavement conditions<br>• Number of Lanes<br>• Type of Pavement (Flexible/Rigid/Surfaced/ Unsurfaced) | Yes ☐ No ☐ NA ☐ | | |
| 2.10 | Existing right of way details | Yes ☐ No ☐ NA ☐ | | |
| 2.11 | Number/ Location of major and minor bridges | Yes ☐ No ☐ NA ☐ | | |
| 2.12 | Number/ Location of level crossings | Yes ☐ No ☐ NA ☐ | | |
| 2.13 | Number/ Location of ROB and RUB | Yes ☐ No ☐ NA ☐ | | |
| 2.14 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **Approach Methodology** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Engineering survey and investigations | Yes ☐ No ☐ NA ☐ | NA | |
| 3.2 | Design of road, pavements and structures | Yes ☐ No ☐ NA ☐ | NA | |
| 3.3 | Environment and social impact assessment | Yes ☐ No ☐ NA ☐ | NA | |
| 3.4 | Estimation of project cost, viability and financing options | Yes ☐ No ☐ NA ☐ | NA | |
| 3.5 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 4 | **Task Assignment and Manning Schedule** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Number of key personnel provided | Yes ☐ No ☐ NA ☐ | | |
| 4.2 | Specific tasks assigned to each key personnel | Yes ☐ No ☐ NA ☐ | NA | |
| 4.3 | Manning schedule for key personnel | Yes ☐ No ☐ NA ☐ | NA | |
| 4.4 | Number of key personnel deployed at site | Yes ☐ No ☐ NA ☐ | | |
| 5 | **Performa for data collection** | Yes ☐ No ☐ NA ☐ | NA | |
| 6 | **Indicative design standards and cross sections** | Yes ☐ No ☐ NA ☐ | NA | |
| 7 | **Development plans** | Yes ☐ No ☐ NA ☐ | NA | |
| 7.1 | Overview of development plans being implemented/ proposed by local bodies | Yes ☐ No ☐ NA ☐ | NA | |
| 7.2 | Overview of impact of such development plans | Yes ☐ No ☐ NA ☐ | NA | |
| 8 | **Quality Assurance Plan** | Yes ☐ No ☐ NA ☐ | NA | |
| 8.1 | Engineering surveys and investigation | Yes ☐ No ☐ NA ☐ | NA | |
| 8.2 | Traffic surveys | Yes ☐ No ☐ NA ☐ | NA | |
| 8.3 | Material geo-technical and sub-soil investigations | Yes ☐ No ☐ NA ☐ | NA | |
| 8.4 | Road and pavement investigations | Yes ☐ No ☐ NA ☐ | NA | |
| 8.5 | Investigation and design of bridges and structures | Yes ☐ No ☐ NA ☐ | NA | |
| 8.6 | Environment and R&R assessment | Yes ☐ No ☐ NA ☐ | NA | |
| 8.7 | Economic and financial analysis | Yes ☐ No ☐ NA ☐ | NA | |
| 8.8 | Drawing and documentation | Yes ☐ No ☐ NA ☐ | NA | |
| 8.9 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 8.10 | Discussion of draft QAP document with client | Yes ☐ No ☐ NA ☐ | NA | |
| 8.11 | Approval of final QAP document by client | Yes ☐ No ☐ NA ☐ | NA | |
| 9 | **Draft design Standards** | Yes ☐ No ☐ NA ☐ | NA | |
| 9.1 | Geometric design standards of highway (Plain) | Yes ☐ No ☐ NA ☐ | NA | |
| 9.2 | Geometric design standards of highway (Hilly) | Yes ☐ No ☐ NA ☐ | NA | |
| 10 | **Conclusions and recommendations** | Yes ☐ No ☐ NA ☐ | NA | |
| 10.1 | Conclusions and recommendations | Yes ☐ No ☐ NA ☐ | NA | |
| 10.2 | Report fulfils project objectives and scope as per RFP | Yes ☐ No ☐ NA ☐ | NA | |
| 10.3 | Report reviewed for errors and omissions | Yes ☐ No ☐ NA ☐ | NA | |
| 10.4 | Compliance report prepared on client observations | Yes ☐ No ☐ NA ☐ | NA | |

# DPR Checklist – Stage 2 – Feasibility Report (Pavements)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/ NO/ NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Overview of client organization / activities** | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **Methodology adopted for feasibility study** | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Socioeconomic profile of the project areas** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Regional economic profile basis last 10 years data as per IRC | Yes ☐ No ☐ NA ☐ | NA | |
| 4.2 | Economic profile of project influence area basis last 10 years data as per IRC | Yes ☐ No ☐ NA ☐ | NA | |
| 4.3 | Socio Economic status of project influence area | Yes ☐ No ☐ NA ☐ | NA | |
| 5 | **Indicative design standards, methodologies, and specifications** | Yes ☐ No ☐ NA ☐ | NA | |
| 6 | **Traffic surveys and analysis** | Yes ☐ No ☐ NA ☐ | NA | |
| 6.1 | Classified traffic volume counts using IHMCL data (7 day data) | Yes ☐ No ☐ NA ☐ | NA | |
| 6.2 | Traffic projection methodology as per IRC:108 | Yes ☐ No ☐ NA ☐ | NA | |
| 6.3 | Projected Traffic data for 20 years | Yes ☐ No ☐ NA ☐ | NA | |
| 6.4 | Current and Projected PCU | Yes ☐ No ☐ NA ☐ | | |
| 6.5 | Current and Projected TVU | Yes ☐ No ☐ NA ☐ | | |
| 6.6 | Origin destination surveys as per IRC: 102 | Yes ☐ No ☐ NA ☐ | NA | |
| 6.7 | Speed and delay studies as per IRC:102 | Yes ☐ No ☐ NA ☐ | NA | |
| 6.8 | Traffic surveys for the design of road junctions as per data in IRC: SP:41 | Yes ☐ No ☐ NA ☐ | NA | |
| 6.9 | Analysis for replacing railway level crossings with over bridges/ subways | Yes ☐ No ☐ NA ☐ | NA | |
| 6.10 | Axle load survey as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/ NO/ NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 6.11 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 6.12 | Traffic surveys monitored and reviewed bythe client | Yes ☐ No ☐ NA ☐ | NA | |
| 7 | **Reconnaissance survey** | Yes ☐ No ☐ NA ☐ | NA | |
| 7.1 | Road Inventory Survey as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 7.2 | Review of Road Inventory survey by client | Yes ☐ No ☐ NA ☐ | NA | |
| 7.3 | Chainage wise details of pavement composition survey | Yes ☐ No ☐ NA ☐ | NA | |
| 7.4 | Geological Survey<br>• Geological Map of the Area<br>• Seismicity | Yes ☐ No ☐ NA ☐ | NA | |
| 7.5 | Climatic Conditions<br>• Temperature<br>• Rainfall<br>• Wind | Yes ☐ No ☐ NA ☐ | NA | |
| 7.6 | Pavement composition and condition survey as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 7.7 | Review of pavement composition and condition survey by client | Yes ☐ No ☐ NA ☐ | NA | |
| 7.8 | Pavement roughness survey as per IRC:SP:16 | Yes ☐ No ☐ NA ☐ | NA | |
| 7.9 | Review of pavement roughness survey by client | Yes ☐ No ☐ NA ☐ | NA | |
| 7.10 | Pavement structural strength survey asper IRC:81 | Yes ☐ No ☐ NA ☐ | NA | |
| 7.11 | Review of pavement structural strength survey by client | Yes ☐ No ☐ NA ☐ | NA | |
| 7.12 | Sub grade characteristics and strengths | Yes ☐ No ☐ NA ☐ | NA | |
| 7.13 | Topographical survey as per IRC:SP:19 using LiDAR<br>• Gradient<br>• Terrain | Yes ☐ No ☐ NA ☐ | NA | |
| 7.14 | Review of topographical survey by client | Yes ☐ No ☐ NA ☐ | NA | |
| 7.15 | Inventory of bridges, culverts and structures | Yes ☐ No ☐ NA ☐ | NA | |
| 7.16 | Condition survey for bridges, culverts and structures | Yes ☐ No ☐ NA ☐ | NA | |
| 7.17 | Review of condition survey for bridges, culverts and structures by client | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/ NO/ NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 7.18 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 8 | **Geotechnical Survey** | Yes ☐ No ☐ NA ☐ | NA | |
| 8.1 | Geo-technical and sub-soil explorations asper IRC:78 | Yes ☐ No ☐ NA ☐ | NA | |
| 8.2 | Bore holes dug for every pier and abutment | Yes ☐ No ☐ NA ☐ | NA | |
| 8.3 | Review of geo-technical and sub-soil explorations by client | Yes ☐ No ☐ NA ☐ | NA | |
| 8.4 | Field testing, soil sampling, laboratory testing in accordance with BIS/ AASHTO/ BS | Yes ☐ No ☐ NA ☐ | NA | |
| 8.5 | Recommendation of Foundation Type and Depth | Yes ☐ No ☐ NA ☐ | NA | |
| 8.6 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 9 | **Hydraulic and Hydrological Survey** | Yes ☐ No ☐ NA ☐ | NA | |
| 9.1 | Hydraulic and hydrological investigationsas per IRC:SP:13 and IRC:5 | Yes ☐ No ☐ NA ☐ | NA | |
| 9.2 | High Flood Level specified | Yes ☐ No ☐ NA ☐ | NA | |
| 9.3 | Depth of Water Table specified | Yes ☐ No ☐ NA ☐ | NA | |
| 9.4 | Ponded Water Level specified | Yes ☐ No ☐ NA ☐ | NA | |
| 9.5 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 9.6 | Review of hydrological investigations by client | Yes ☐ No ☐ NA ☐ | NA | |
| 10 | **Materials Survey** | Yes ☐ No ☐ NA ☐ | NA | |
| 10.1 | Materials Survey conducted as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 10.2 | Sources of Naturally Occurring Aggregates specified<br>• Details of Borrow Pits with Distance from Project Site<br>• Cost of Material/ Transportation | Yes ☐ No ☐ NA ☐ | | |
| 10.3 | Sources of Manufactured Items specified<br>• Details of suppliers with distance from project site<br>• Cost of material/ transportation | Yes ☐ No ☐ NA ☐ | NA | |
| 10.4 | Sources of water for construction specifiedas per IS: 456 | Yes ☐ No ☐ NA ☐ | NA | |
| 10.5 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/ NO/ NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 11 | **Environmental screening/ preliminary environmental assessment** | Yes ☐ No ☐ NA ☐ | NA | |
| 11.1 | Analysis basis Initial Environment Examination in IRC: SP: 19 | Yes ☐ No ☐ NA ☐ | NA | |
| 11.2 | Recommended feasible mitigation measures | Yes ☐ No ☐ NA ☐ | NA | |
| 12 | **Initial social assessment/ preliminary LA resettlement plan** | Yes ☐ No ☐ NA ☐ | NA | |
| 12.1 | Analysis basis Initial Environment Examination in IRC: SP: 19 | Yes ☐ No ☐ NA ☐ | NA | |
| 12.2 | Details of consultation with potentially affected persons | Yes ☐ No ☐ NA ☐ | NA | |
| 12.3 | Names/ Details of consultation with local NGOs | Yes ☐ No ☐ NA ☐ | | |
| 12.4 | Names/ Details of consultation with municipal authorities | Yes ☐ No ☐ NA ☐ | | |
| 12.5 | Preliminary resettlement plan | Yes ☐ No ☐ NA ☐ | NA | |
| 12.6 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 13 | **Cost estimates** | Yes ☐ No ☐ NA ☐ | NA | |
| 13.1 | Item rates and rate analysis | Yes ☐ No ☐ NA ☐ | NA | |
| 13.2 | Escalation | Yes ☐ No ☐ NA ☐ | NA | |
| 14 | **Economic and financial analysis** | Yes ☐ No ☐ NA ☐ | NA | |
| 14.1 | Estimated cost details | Yes ☐ No ☐ NA ☐ | NA | |
| 14.2 | Projected revenues details | Yes ☐ No ☐ NA ☐ | NA | |
| 14.3 | Assumptions stated | Yes ☐ No ☐ NA ☐ | NA | |
| 14.4 | Analysis and results (IRR, Sensitivity Analysis, Financial Viability) | Yes ☐ No ☐ NA ☐ | NA | |
| 15 | **Strip plan and Alignment** | Yes ☐ No ☐ NA ☐ | NA | |
| 15.1 | Details of center line of proposed highway | Yes ☐ No ☐ NA ☐ | NA | |
| 15.2 | Details of existing RoW | Yes ☐ No ☐ NA ☐ | NA | |
| 15.3 | Details of proposed RoW | Yes ☐ No ☐ NA ☐ | NA | |
| 15.4 | Details about ownership of land to be acquired | Yes ☐ No ☐ NA ☐ | NA | |
| 15.5 | Strip plan basis reconnaissance and topographic surveys | Yes ☐ No ☐ NA ☐ | NA | |
| 15.6 | Strip plan reviewed and approved by the client | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/ NO/ NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 16 | **Alignment Options Study** | Yes ☐ No ☐ NA ☐ | NA | |
| 16.1 | At least two alignments proposed<br>• Details of Alignments on Map | Yes ☐ No ☐ NA ☐ | NA | |
| 16.2 | Review of options with client | Yes ☐ No ☐ NA ☐ | NA | |
| 16.2.1 | Review of options with local authority | Yes ☐ No ☐ NA ☐ | NA | |
| 16.3 | Length of the project along proposed alignment options | Yes ☐ No ☐ NA ☐ | | |
| 16.4 | Land Acquisition required along alignment options | Yes ☐ No ☐ NA ☐ | | |
| 16.4.1 | Environmental impact of each option | Yes ☐ No ☐ NA ☐ | | |
| 16.4.2 | Review of road geometry and safety for each option | Yes ☐ No ☐ NA ☐ | | |
| 16.5 | Cost Estimates of alternatives | Yes ☐ No ☐ NA ☐ | | |
| 16.6 | Recommended Alignment with Justification | Yes ☐ No ☐ NA ☐ | NA | |
| 16.7 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 17 | **Technical Specifications** | Yes ☐ No ☐ NA ☐ | NA | |
| 17.1 | MoRTH technical specifications for Roads and Bridge works followed | Yes ☐ No ☐ NA ☐ | NA | |
| 17.2 | Details of technical specifications | Yes ☐ No ☐ NA ☐ | NA | |
| 18 | **Rate Analysis** | Yes ☐ No ☐ NA ☐ | NA | |
| 18.1 | Rate analysis for all relevant items as per latest SoR | Yes ☐ No ☐ NA ☐ | NA | |
| 19 | **Cost Estimates** | Yes ☐ No ☐ NA ☐ | NA | |
| 19.1 | Cost estimates for all relevant items as per latest SoR | Yes ☐ No ☐ NA ☐ | NA | |
| 20 | **Bill of quantities** | Yes ☐ No ☐ NA ☐ | NA | |
| 21 | **Conclusions and recommendations** | Yes ☐ No ☐ NA ☐ | NA | |
| 21.1 | Conclusions and recommendations | Yes ☐ No ☐ NA ☐ | NA | |
| 21.2 | Report fulfils project objectives and scopeas per RFP | Yes ☐ No ☐ NA ☐ | NA | |
| 21.3 | Report reviewed for errors and omissions | Yes ☐ No ☐ NA ☐ | NA | |
| 21.4 | Compliance report prepared on client observations | Yes ☐ No ☐ NA ☐ | NA | |

## DPR Checklist – Stage 3 – LA and Clearances I Report (Pavements)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Strip plan- additional details added** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Details of centreline, existing structures,road furniture and other features | Yes ☐ No ☐ NA ☐ | NA | |
| 2.2 | Widening scheme | Yes ☐ No ☐ NA ☐ | NA | |
| 2.3 | New construction/ reconstruction of structures and amenities | Yes ☐ No ☐ NA ☐ | NA | |
| 2.4 | Existing and proposed right of way | Yes ☐ No ☐ NA ☐ | NA | |
| 2.5 | Clearances impacting each chainage | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **Forest Clearance** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Requirement for forest clearance identified | Yes ☐ No ☐ NA ☐ | NA | |
| 3.2 | Date/ Details of initial consultation with competent authority | Yes ☐ No ☐ NA ☐ | | |
| 3.3 | Details/cost of trees being felled basis concerned District Forest Office | Yes ☐ No ☐ NA ☐ | | |
| 3.4 | Date of submission of proposal for forest clearance | Yes ☐ No ☐ NA ☐ | NA | |
| 3.5 | Review of proposal by client | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Wildlife Clearance** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Requirement for wildlife clearance identified | Yes ☐ No ☐ NA ☐ | NA | |
| 4.2 | Date/ Details of initial consultation with competent authority | Yes ☐ No ☐ NA ☐ | | |
| 4.3 | Details/cost of trees being felled basis concerned District Forest Office | Yes ☐ No ☐ NA ☐ | | |
| 4.4 | Date of submission of proposal for wildlife clearance | Yes ☐ No ☐ NA ☐ | | |
| 4.5 | Review of proposal by client | Yes ☐ No ☐ NA ☐ | NA | |
| 5 | **Utility Clearances (Electricity)** | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 5.1 | Identification of overground utilities | Yes ☐ No ☐ NA ☐ | NA | |
| 5.2 | Identification of underground utilities using GPR, Induction Locator or equivalent technologies | Yes ☐ No ☐ NA ☐ | NA | |
| 5.3 | Name/ Details of consultation with local authority/ people | Yes ☐ No ☐ NA ☐ | | |
| 5.4 | Utility relocation plan with existing / proposed location showing existing RoWand topographic details | Yes ☐ No ☐ NA ☐ | NA | |
| 5.5 | Cost for relocation as per authority | Yes ☐ No ☐ NA ☐ | | |
| 5.6 | Date of proposal submission to competent authority | Yes ☐ No ☐ NA ☐ | | |
| 5.7 | Review of utility relocation plan/ proposalby client | Yes ☐ No ☐ NA ☐ | NA | |
| 6 | **Utility Clearances (Water)** | Yes ☐ No ☐ NA ☐ | NA | |
| 6.1 | Identification of overground utilities in RoW | Yes ☐ No ☐ NA ☐ | NA | |
| 6.2 | Identification of underground utilities using GPR, Induction Locator or equivalent technologies | Yes ☐ No ☐ NA ☐ | NA | |
| 6.3 | Name/ Details of consultation with local authority/ people | Yes ☐ No ☐ NA ☐ | | |
| 6.4 | Utility relocation plan with existing / proposed location showing existing RoWand topographic details | Yes ☐ No ☐ NA ☐ | NA | |
| 6.5 | Cost for relocation as per authority | Yes ☐ No ☐ NA ☐ | | |
| 6.6 | Date of proposal submission to competent authority | Yes ☐ No ☐ NA ☐ | NA | |
| 6.7 | Review of utility relocation plan/ proposalby client | Yes ☐ No ☐ NA ☐ | NA | |
| 7 | **Utility Clearances (Others)** | Yes ☐ No ☐ NA ☐ | NA | |
| 7.1 | Identification of overground utilities in RoW | Yes ☐ No ☐ NA ☐ | NA | |
| 7.2 | Identification of underground utilities using GPR, Induction Locator or equivalent technologies | Yes ☐ No ☐ NA ☐ | NA | |
| 7.3 | Name/ Details of consultation with local authority/ people | Yes ☐ No ☐ NA ☐ | | |
| 7.4 | Utility relocation plan with existing / proposed location showing existing RoWand topographic details | Yes ☐ No ☐ NA ☐ | NA | |
| 7.5 | Cost for relocation as per authority | Yes ☐ No ☐ NA ☐ | | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 7.6 | Date of proposal submission to competent authority | Yes ☐ No ☐ NA ☐ | | |
| 7.7 | Review of utility relocation plan/ proposalby client | Yes ☐ No ☐ NA ☐ | NA | |
| 8 | **Railway Clearances** | Yes ☐ No ☐ NA ☐ | NA | |
| 8.1 | Identification of ROB/ RUB on project corridor | Yes ☐ No ☐ NA ☐ | NA | |
| 8.2 | Initial consultation with competent authority | Yes ☐ No ☐ NA ☐ | NA | |
| 8.3 | Date of proposal submission to competent authority | Yes ☐ No ☐ NA ☐ | | |
| 8.4 | Review of GAD/ proposal by client | Yes ☐ No ☐ NA ☐ | NA | |
| 9 | **Other Clearances** | Yes ☐ No ☐ NA ☐ | NA | |
| 9.1 | Requirement for other clearances identified | Yes ☐ No ☐ NA ☐ | NA | |
| 9.2 | Date of proposal submission to competent authority | Yes ☐ No ☐ NA ☐ | | |
| 9.3 | Review of proposal by client | Yes ☐ No ☐ NA ☐ | NA | |
| 10 | **Land Acquisition** | Yes ☐ No ☐ NA ☐ | NA | |
| 10.1 | Detailed schedule about acquisition of landholdings as per land records | Yes ☐ No ☐ NA ☐ | NA | |
| 10.2 | Consultation with affected persons | Yes ☐ No ☐ NA ☐ | NA | |
| 10.3 | Name/ Details of consultation with NGOs | Yes ☐ No ☐ NA ☐ | | |
| 10.4 | Name/ Details of consultation with concerned government agencies | Yes ☐ No ☐ NA ☐ | | |
| 10.5 | Total land required, land area already available , land to be acquired identified | Yes ☐ No ☐ NA ☐ | | |
| 10.6 | Review of land acquisition using digital cadastral map by client | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7 | Draft 3a notification submitted | Yes ☐ No ☐ NA ☐ | NA | |
| 10.8 | Review of 3a notification by client | Yes ☐ No ☐ NA ☐ | NA | |
| 10.9 | Date of 3a gazette notification | Yes ☐ No ☐ NA ☐ | | |
| 10.10 | Draft 3a notification submitted | Yes ☐ No ☐ NA ☐ | NA | |
| 10.11 | Review of 3A notification by client | Yes ☐ No ☐ NA ☐ | NA | |
| 10.12 | Date of 3A gazette notification | Yes ☐ No ☐ NA ☐ | | |
| 11 | **Conclusions and recommendations** | Yes ☐ No ☐ NA ☐ | NA | |
| 11.1 | Conclusions and recommendations | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 11.2 | Report fulfils project objectives and scopeas per RFP | Yes ☐ No ☐ NA ☐ | NA | |
| 11.3 | Report reviewed for errors and omissions | Yes ☐ No ☐ NA ☐ | NA | |
| 11.4 | Compliance report prepared on client observations | Yes ☐ No ☐ NA ☐ | NA | |

# DPR Checklist – Stage 4 – Detailed Project Report (Pavements)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Main Report** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Introduction and project background** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Overview of project location, project objectives etc. | Yes ☐ No ☐ NA ☐ | NA | |
| 2.2 | Overview of report structure, deliverablesetc. | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **Social analysis of the project** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Project impact on stakeholders such as local people | Yes ☐ No ☐ NA ☐ | NA | |
| 3.2 | Project impact on residential, commercialand public properties | Yes ☐ No ☐ NA ☐ | NA | |
| 3.3 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Reconnaissance survey** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Geometric Features of the Existing Road<br>Design Speed<br>• Sight distance details<br>• Horizontal Alignment Details<br>• Vertical Alignment Details<br>• Height of Embankment | Yes ☐ No ☐ NA ☐ | | |
| 4.2 | Topographical Survey using LiDAR (or equivalent technology) as per IRC:SP:19<br>• Gradient<br>• Terrain | Yes ☐ No ☐ NA ☐ | NA | |
| 4.3 | Pavement composition and condition survey as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 4.4 | Pavement roughness survey as per IRC:SP:16 | Yes ☐ No ☐ NA ☐ | Na | |
| 4.5 | Pavement structural strength survey asper IRC:81 | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 4.6 | Geological Survey<br>• Geological Map of the Area<br>• Seismicity | Yes ☐ No ☐ NA ☐ | NA | |
| 4.7 | Climatic Conditions<br>• Temperature<br>• Rainfall<br>• Wind | Yes ☐ No ☐ NA ☐ | NA | |
| 4.8 | Land Use along the existing alignment<br>• Map of the Project Area depicting Agricultural/Habitation/Forest Area | Yes ☐ No ☐ NA ☐ | NA | |
| 4.9 | Details of Existing Structures<br>• Map of the Project Area depicting Hutments/Buildings/Temples/Public Building/Any Other Significant Structure | Yes ☐ No ☐ NA ☐ | NA | |
| 4.10 | Inventory and condition survey of culverts | Yes ☐ No ☐ NA ☐ | NA | |
| 4.11 | Geo-technical and sub-soil explorationsas per IRC:78 | Yes ☐ No ☐ NA ☐ | NA | |
| 4.12 | Number of Bore holes dug (holes for every pier and abutment) | Yes ☐ No ☐ NA ☐ | | |
| 4.13 | Field testing, soil sampling, laboratory testing as per IRC: 78 | Yes ☐ No ☐ NA ☐ | NA | |
| 4.14 | Recommendation of Foundation Type and Depth | Yes ☐ No ☐ NA ☐ | | |
| 4.15 | Hydrological investigations as per IRC:5 | Yes ☐ No ☐ NA ☐ | NA | |
| 4.16 | High Flood Level specified | Yes ☐ No ☐ NA ☐ | NA | |
| 4.17 | Depth of Water Table specified | Yes ☐ No ☐ NA ☐ | NA | |
| 4.18 | Ponded Water Level specified | Yes ☐ No ☐ NA ☐ | NA | |
| 4.19 | Materials Survey conducted as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 4.20 | Sources of Naturally Occurring Aggregates specified<br>• Details of Borrow Pits with Distance from Project Site<br>• Cost of Material/Transportation | Yes ☐ No ☐ NA ☐ | | |
| 4.20.1 | Sources of environmentally friendly construction materials identified as per MoRT&H circular | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 4.21 | Sources of Manufactured Items specified<br>• Details of Suppliers with Distance from Project Site<br>• Cost of Material/Transportation | Yes ☐ No ☐ NA ☐ | NA | |
| 4.22 | Source of Water for construction specifiedas per IS:456 | Yes ☐ No ☐ NA ☐ | NA | |
| 4.23 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 5 | **Traffic studies and demand forecast designs** | Yes ☐ No ☐ NA ☐ | NA | |
| 5.1 | Classified traffic volume counts using IHMCL data (7 day data) | Yes ☐ No ☐ NA ☐ | NA | |
| 5.2 | Traffic projection methodology as per IRC:108 | Yes ☐ No ☐ NA ☐ | NA | |
| 5.3 | Projected Traffic data for 20 years | Yes ☐ No ☐ NA ☐ | NA | |
| 5.4 | Current and Projected PCU | Yes ☐ No ☐ NA ☐ | | |
| 5.5 | Current and Projected TVU | Yes ☐ No ☐ NA ☐ | | |
| 5.6 | Origin destination surveys as per IRC: 102 | Yes ☐ No ☐ NA ☐ | NA | |
| 5.7 | Speed and delay studies as per IRC:102 | Yes ☐ No ☐ NA ☐ | NA | |
| 5.8 | Traffic surveys for the design of road junctions as per data in IRC: SP:41 | Yes ☐ No ☐ NA ☐ | NA | |
| 5.9 | Analysis for replacing railway level crossings with over bridges/ subways | Yes ☐ No ☐ NA ☐ | NA | |
| 5.10 | Axle load survey as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 5.11 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 5.12 | Traffic surveys monitored and reviewedby the client | Yes ☐ No ☐ NA ☐ | NA | |
| 6 | **Cost estimates** | Yes ☐ No ☐ NA ☐ | NA | |
| 6.1 | Project costing as per latest SoR | Yes ☐ No ☐ NA ☐ | NA | |
| 7 | **Environmental aspects** | Yes ☐ No ☐ NA ☐ | NA | |
| 7.1 | Environment profile of the project region | Yes ☐ No ☐ NA ☐ | NA | |
| 7.2 | Details of Public consultation at residentialand commercial settlements affected | Yes ☐ No ☐ NA ☐ | NA | |
| 7.3 | Impact analysis and mitigation measures | Yes ☐ No ☐ NA ☐ | NA | |
| 8 | **Economic and commercial analysis** | Yes ☐ No ☐ NA ☐ | NA | |
| 8.1 | Estimated cost details | Yes ☐ No ☐ NA ☐ | NA | |
| 8.2 | Projected revenues details | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 8.3 | Assumptions stated | Yes ☐ No ☐ NA ☐ | NA | |
| 8.4 | Analysis and results (IRR, Sensitivity Analysis, Financial Viability) | Yes ☐ No ☐ NA ☐ | NA | |
| 8.5 | Conclusions and recommendations | Yes ☐ No ☐ NA ☐ | NA | |
| 8.6 | Financial model shared with client and reviewed | Yes ☐ No ☐ NA ☐ | NA | |
| 9 | **Conclusions and recommendations** | Yes ☐ No ☐ NA ☐ | NA | |
| 9.1 | Report fulfils project objectives and scopeas per RFP | Yes ☐ No ☐ NA ☐ | NA | |
| 9.2 | Report reviewed for errors and omissions | Yes ☐ No ☐ NA ☐ | NA | |
| 9.3 | Compliance report prepared on client observations | Yes ☐ No ☐ NA ☐ | NA | |
| 10 | **Design Report** | Yes ☐ No ☐ NA ☐ | NA | |
| 10.1 | Highway improvement proposals | Yes ☐ No ☐ NA ☐ | NA | |
| 10.2 | Highway geometric designs | Yes ☐ No ☐ NA ☐ | NA | |
| 10.3 | Roadside drainage | Yes ☐ No ☐ NA ☐ | NA | |
| 10.4 | Intersections | Yes ☐ No ☐ NA ☐ | NA | |
| 10.5 | Urban service roads | Yes ☐ No ☐ NA ☐ | NA | |
| 10.6 | Bus-stops | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7 | Toll plazas | Yes ☐ No ☐ NA ☐ | NA | |
| 10.8 | Pedestrian crossings | Yes ☐ No ☐ NA ☐ | NA | |
| 10.9 | Utility relocation | Yes ☐ No ☐ NA ☐ | NA | |
| 10.10 | Pavement | Yes ☐ No ☐ NA ☐ | NA | |
| 10.11 | Structures | Yes ☐ No ☐ NA ☐ | NA | |
| 10.12 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 10.13 | Pavement deflection survey as per IRC81-1997 | Yes ☐ No ☐ NA ☐ | NA | |
| 10.14 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 11 | **Materials Report** | Yes ☐ No ☐ NA ☐ | NA | |
| 11.1 | Material investigations as per IRC:10 | Yes ☐ No ☐ NA ☐ | NA | |
| 11.2 | Review of material investigations by client | Yes ☐ No ☐ NA ☐ | NA | |
| 11.3 | Multiple borrow areas identified | Yes ☐ No ☐ NA ☐ | NA | |
| 11.4 | Material survey as per IRC: SP: 19 | Yes ☐ No ☐ NA ☐ | NA | |
| 11.5 | Review of material survey by client | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 11.6 | Geo-technical and sub-soil explorationsas per IRC:78 | Yes ☐ No ☐ NA ☐ | NA | |
| 11.7 | Review of geo-technical and sub-soil explorations by client | Yes ☐ No ☐ NA ☐ | NA | |
| 11.8 | Field testing, soil sampling, laboratory testing in accordance with BIS/ AASHTO/ BS | Yes ☐ No ☐ NA ☐ | NA | |
| 11.9 | Pavement composition and condition survey as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 11.10 | Review of pavement composition and condition survey by client | Yes ☐ No ☐ NA ☐ | NA | |
| 11.11 | Pavement roughness survey as per IRC:SP:16 | Yes ☐ No ☐ NA ☐ | NA | |
| 11.12 | Review of pavement roughness survey by client | Yes ☐ No ☐ NA ☐ | NA | |
| 11.13 | Pavement structural strength survey asper IRC:81 | Yes ☐ No ☐ NA ☐ | NA | |
| 11.14 | Review of pavement structural strength survey by client | Yes ☐ No ☐ NA ☐ | NA | |
| 11.15 | Water sample tests as per MoRTH specifications | Yes ☐ No ☐ NA ☐ | NA | |
| 11.16 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 12 | **Environmental Assessment Report/ Resettlement and Rehabilitation Plan** | Yes ☐ No ☐ NA ☐ | NA | |
| 12.1 | Option for alignment alternatives considered and conclusions | Yes ☐ No ☐ NA ☐ | NA | |
| 12.2 | Land environment data collection and details/ impact/ mitigation measures | Yes ☐ No ☐ NA ☐ | NA | |
| 12.3 | Air environment data collection and details/ impact/ mitigation measures | Yes ☐ No ☐ NA ☐ | NA | |
| 12.4 | Water resources details/ impact/ mitigation measures | Yes ☐ No ☐ NA ☐ | NA | |
| 12.5 | Noise environment details/ impact/ mitigation measures | Yes ☐ No ☐ NA ☐ | NA | |
| 12.6 | Biological environment details/ impact/ mitigation measures | Yes ☐ No ☐ NA ☐ | NA | |
| 12.7 | Details of public consultation | Yes ☐ No ☐ NA ☐ | NA | |
| 12.8 | Environment monitoring and management plan | Yes ☐ No ☐ NA ☐ | NA | |
| 12.9 | Details of social impact assessment | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 12.10 | Details of resettlement and rehabilitation action plan | Yes ☐ No ☐ NA ☐ | NA | |
| 12.11 | Measures to minimize resettlement | Yes ☐ No ☐ NA ☐ | NA | |
| 12.12 | Details of public consultation with stakeholders | Yes ☐ No ☐ NA ☐ | NA | |
| 12.13 | Details of implementation arrangement /budget | Yes ☐ No ☐ NA ☐ | NA | |
| 12.14 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 13 | **Technical Specifications** | Yes ☐ No ☐ NA ☐ | NA | |
| 13.1 | MoRTH technical specifications for Roads and Bridge works followed | Yes ☐ No ☐ NA ☐ | NA | |
| 13.2 | Details of technical specifications | Yes ☐ No ☐ NA ☐ | NA | |
| 14 | **Rate Analysis** | Yes ☐ No ☐ NA ☐ | NA | |
| 14.1 | Rate analysis for all relevant items as per latest SoR | Yes ☐ No ☐ NA ☐ | NA | |
| 15 | **Cost Estimates** | Yes ☐ No ☐ NA ☐ | NA | |
| 15.1 | Cost estimates for all relevant items asper latest SoR | Yes ☐ No ☐ NA ☐ | NA | |
| 16 | **Bill of quantities** | Yes ☐ No ☐ NA ☐ | NA | |
| 17 | **Drawing Volume** | Yes ☐ No ☐ NA ☐ | NA | |
| 18 | **Digital drawings of road** | | | |
| 18.1 | Highway cross sections | Yes ☐ No ☐ NA ☐ | | |
| 18.2 | 3D engineered models of:<br>• Road alignment geometry<br>• Proposed highway<br>• Proposed structures | Yes ☐ No ☐ NA ☐ | | |

# DPR Checklist – Stage 5 – Technical Schedules (Pavements)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details / Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Bid documents- EPC** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Bid documents- BOT/PPP** | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **Bid documents- other, if any** | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Draft concession agreement** | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Schedule D - Specifications and standards** | Yes ☐ No ☐ NA ☐ | NA | |
| 5 | **Any other relevant details** | Yes ☐ No ☐ NA ☐ | NA | |

# DPR Checklist – Stage 6 – LA and Clearances II Report (Pavements)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Environment Clearance** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Details of public hearings completed | Yes ☐ No ☐ NA ☐ | | |
| 2.2 | Date of final environment clearance by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 3 | **Forest Clearance** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Date/ Details of Joint site inspection with DFO/ competent authority | Yes ☐ No ☐ NA ☐ | | |
| 3.2 | Date of Stage I forest clearance approvalby competent authority | Yes ☐ No ☐ NA ☐ | | |
| 3.3 | Date of final forest clearance approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 4 | **Wildlife Clearance** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Date/ Details of joint site inspection with DFO/ competent authority | Yes ☐ No ☐ NA ☐ | | |
| 4.2 | Date of final wildlife clearance approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 5 | **Utility Clearances (Electricity)** | Yes ☐ No ☐ NA ☐ | NA | |
| 5.1 | Date/ Details of Joint site inspection with competent authority | Yes ☐ No ☐ NA ☐ | | |
| 5.2 | Date of estimate submission by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 5.3 | Date of estimate approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 5.4 | Approved utility shifting proposal including strip plan | Yes ☐ No ☐ NA ☐ | | |
| 5.5 | Details of approved contractors, SoR and deposit details for user agency | Yes ☐ No ☐ NA ☐ | NA | |
| 5.6 | Utilities checklist, no upgradation certificate attached | Yes ☐ No ☐ NA ☐ | | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 6.2 | Date of estimate submission by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 6.3 | Date of estimate approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 6.4 | Approved utility shifting proposal including strip plan | Yes ☐ No ☐ NA ☐ | | |
| 6.5 | Details of approved contractors, SoR and deposit details for user agency | Yes ☐ No ☐ NA ☐ | NA | |
| 6.6 | Utilities checklist, no upgradation certificate attached | Yes ☐ No ☐ NA ☐ | | |
| 7.2 | Date of estimate submission by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 7.3 | Date of estimate approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 7.4 | Approved utility shifting proposal including strip plan | Yes ☐ No ☐ NA ☐ | | |
| 7.5 | Details of approved contractors, SoR and deposit details for user agency | Yes ☐ No ☐ NA ☐ | NA | |
| 7.6 | Utilities checklist, no upgradation certificate attached | Yes ☐ No ☐ NA ☐ | | |
| 8.2 | Date of final approval of GAD by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 9 | **Other Clearances** | Yes ☐ No ☐ NA ☐ | NA | |
| 9.1 | Date of final approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 10 | **Land Acquisition** | Yes ☐ No ☐ NA ☐ | NA | |
| 10.1 | Draft 3a notification submitted | Yes ☐ No ☐ NA ☐ | | |
| 10.2 | Review of 3a notification by client | Yes ☐ No ☐ NA ☐ | | |
| 10.3 | Date of 3a gazette notification | Yes ☐ No ☐ NA ☐ | | |
| 10.4 | Draft 3a notification submitted | Yes ☐ No ☐ NA ☐ | | |
| 10.5 | Review of 3A notification by client | Yes ☐ No ☐ NA ☐ | | |
| 10.6 | Date of 3A gazette notification | Yes ☐ No ☐ NA ☐ | | |
| 10.7 | Date of Joint Measurement Survey with competent authority | Yes ☐ No ☐ NA ☐ | | |
| 10.7.1 | Date of survey - village wise | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.2 | Land type –by survey number | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.3 | Nature of Land –by survey number | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 10.7.4 | Ownership status of plots- by survey number | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.5 | Verification of area to be acquired – by survey number | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.6 | List of structures on each plot | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.7 | Sketches of updated alignment by village | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.8 | Verification from Land revenue department | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.9 | Verification by CALA office | Yes ☐ No ☐ NA ☐ | NA | |

## DPR Checklist – Stage 7 – Award determination (Pavements)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Village level summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Total private and public land being acquired | Yes ☐ No ☐ NA ☐ | NA | |
| 2.2 | Variation in area and nature of land against 3D with justification | Yes ☐ No ☐ NA ☐ | NA | |
| 2.3 | Method used by CALA to arrive at award | Yes ☐ No ☐ NA ☐ | NA | |
| 2.4 | Date of award by CALA and approval by NHIDCL along with valuation report | | | |
| 2.5 | Total award calculated and deviation from RFCTLARR act | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **In detail for each Village** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Updated land acquisition tracker with status of:<br>• Notifications<br>• Award<br>• Disbursement | Yes ☐ No ☐ NA ☐ | NA | |
| 3.2 | Valuation report and details of award calculation- verification by state authorityto be included | Yes ☐ No ☐ NA ☐ | NA | |
| 3.3 | Claims report | Yes ☐ No ☐ NA ☐ | NA | |
| 3.4 | Copies of notifications published | Yes ☐ No ☐ NA ☐ | NA | |
| 3.5 | Copies of land possession certificates received | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Conclusions and recommendations** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Conclusions and recommendations | Yes ☐ No ☐ NA ☐ | NA | |
| 4.2 | Report fulfils project objectives and scopeas per RFP | Yes ☐ No ☐ NA ☐ | NA | |
| 4.3 | Report reviewed for errors and omissions | Yes ☐ No ☐ NA ☐ | NA | |
| 4.4 | Compliance report prepared on client observations | Yes ☐ No ☐ NA ☐ | NA | |

# DPR Checklist – Stage 8 – Land possession report (Pavements)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Village level summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Total private and public land being acquired | Yes ☐ No ☐ NA ☐ | NA | |
| 2.2 | Date of final award by CALA and approval by NHIDCL | | | |
| 2.3 | Status of disbursement on date of receiptof Land possession certificate | Yes ☐ No ☐ NA ☐ | NA | |
| 2.4 | Key issues being faced in completing land acquisition, if any | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **In detail for each Village** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Updated land acquisition tracker with status of:<br>• Notifications<br>• Award<br>• Disbursement | Yes ☐ No ☐ NA ☐ | NA | |
| 3.2 | Final award and claims report | Yes ☐ No ☐ NA ☐ | NA | |
| 3.3 | Copies of notifications published, land possession certificates received | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Conclusions and recommendations** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Conclusions and recommendations | Yes ☐ No ☐ NA ☐ | NA | |
| 4.2 | Report fulfils project objectives and scope as per RFP | Yes ☐ No ☐ NA ☐ | NA | |
| 4.3 | Report reviewed for errors and omissions | Yes ☐ No ☐ NA ☐ | NA | |
| 4.4 | Compliance report prepared on client observations | Yes ☐ No ☐ NA ☐ | NA | |
| **5** | **GIS Map containing digitsed details of land parcels acquired with all relevant details** | **Yes ☐ No ☐ NA ☐** | **NA** | |

## Annexure III: Checklists for Structures such as ROB/ RUB

### DPR Checklist – Stage 1 – Inception Report (Structures)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Project Appreciation** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Location of site office | Yes ☐ No ☐ NA ☐ | | |
| 2.2 | Review of scope of ToR and gap identification | Yes ☐ No ☐ NA ☐ | NA | |
| 2.3 | Details of key departments for documents | Yes ☐ No ☐ NA ☐ | | |
| 2.4 | Project description<br>• Existing LC number<br>• Start and End Chainage<br>• Village/District | Yes ☐ No ☐ NA ☐ | | |
| 2.5 | Project location map<br>• On State Map<br>• On District Map<br>• Latitude & Longitude Coordinates of the LC | Yes ☐ No ☐ NA ☐ | | |
| 2.6 | Details of Existing Level Crossing<br>• Number of Railway Tracks<br>• Type of Railway Tracks (Broad/Metre/Narrow)<br>• No. of trains per day | Yes ☐ No ☐ NA ☐ | | |
| 2.7 | Justification for need of an ROB/RUB (on basis of TVU count) | Yes ☐ No ☐ NA ☐ | NA | |
| 2.8 | Overview of land use plans | Yes ☐ No ☐ NA ☐ | NA | |
| 2.9 | Overview of existing pavement conditions<br>• Number of Lanes<br>• Type of Pavement (Flexible/Rigid/Surfaced/Unsurfaced) | Yes ☐ No ☐ NA ☐ | | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 2.10 | Existing right of way details | Yes ☐ No ☐ NA ☐ | | |
| 2.11 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **Approach Methodology** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Engineering survey and investigations | Yes ☐ No ☐ NA ☐ | NA | |
| 3.2 | Design of road, pavements and structures | Yes ☐ No ☐ NA ☐ | NA | |
| 3.3 | Environment and social impact assessment | Yes ☐ No ☐ NA ☐ | NA | |
| 3.4 | Estimation of project cost, viability and financing options | Yes ☐ No ☐ NA ☐ | NA | |
| 3.5 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Task Assignment and Manning Schedule** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Number of key personnel provided | Yes ☐ No ☐ NA ☐ | | |
| 4.2 | Specific tasks assigned to each key personnel | Yes ☐ No ☐ NA ☐ | NA | |
| 4.3 | Manning schedule for key personnel | Yes ☐ No ☐ NA ☐ | NA | |
| 4.4 | Number of key personnel deployed atsite | Yes ☐ No ☐ NA ☐ | | |
| 5 | **Performa for data collection** | Yes ☐ No ☐ NA ☐ | NA | |
| 6 | **Indicative Design standards and cross sections** | Yes ☐ No ☐ NA ☐ | NA | |
| 7 | **Development plans** | Yes ☐ No ☐ NA ☐ | NA | |
| 7.1 | Overview of development plans being implemented/ proposed by local bodies | Yes ☐ No ☐ NA ☐ | NA | |
| 7.2 | Overview of impact of such development plans | Yes ☐ No ☐ NA ☐ | NA | |
| 8 | **Quality Assurance Plan** | Yes ☐ No ☐ NA ☐ | NA | |
| 8.1 | Engineering surveys and investigation | Yes ☐ No ☐ NA ☐ | NA | |
| 8.2 | Traffic surveys | Yes ☐ No ☐ NA ☐ | NA | |
| 8.3 | Material geo-technical and sub-soil investigations | Yes ☐ No ☐ NA ☐ | NA | |
| 8.4 | Road and pavement investigations | Yes ☐ No ☐ NA ☐ | NA | |
| 8.5 | Investigation and design of bridges and structures | Yes ☐ No ☐ NA ☐ | NA | |
| 8.6 | Environment and R&R assessment | Yes ☐ No ☐ NA ☐ | NA | |
| 8.7 | Economic and financial analysis | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 8.8 | Drawing and documentation | Yes ☐ No ☐ NA ☐ | NA | |
| 8.9 | Discussion of draft QAP document with client | Yes ☐ No ☐ NA ☐ | NA | |
| 8.10 | Approval of final QAP document by client | Yes ☐ No ☐ NA ☐ | NA | |
| 8.11 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 9 | **Draft design standards** | Yes ☐ No ☐ NA ☐ | NA | |
| 9.1 | Geometric design standards of bridges (Plain) | Yes ☐ No ☐ NA ☐ | NA | |
| 9.2 | Geometric design standards of bridges (Hilly) | Yes ☐ No ☐ NA ☐ | NA | |
| 9.3 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 10 | **Conclusions and recommendations** | Yes ☐ No ☐ NA ☐ | NA | |
| 10.1 | Conclusions and recommendations | Yes ☐ No ☐ NA ☐ | NA | |
| 10.2 | Report fulfils project objectives and scope as per RFP | Yes ☐ No ☐ NA ☐ | NA | |
| 10.3 | Report reviewed for errors and omissions | Yes ☐ No ☐ NA ☐ | NA | |
| 10.4 | Compliance report prepared on client observations | Yes ☐ No ☐ NA ☐ | NA | |

## DPR Checklist – Stage 2 – Feasibility Report (Structures)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Overview of client organization / activities** | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **Methodology adopted for feasibility study** | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Socioeconomic profile of the project areas** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Regional economic profile basis last 10 years data as per IRC | Yes ☐ No ☐ NA ☐ | NA | |
| 4.2 | Economic profile of project influence area basis last 10 years data as per IRC | Yes ☐ No ☐ NA ☐ | NA | |
| 4.3 | Socio Economic status of project influence area | Yes ☐ No ☐ NA ☐ | NA | |
| 5 | **Indicative design standards, methodologies, and specifications** | Yes ☐ No ☐ NA ☐ | NA | |
| 6 | **Traffic surveys and analysis** | Yes ☐ No ☐ NA ☐ | NA | |
| 6.1 | Classified traffic volume counts using IHMCL data (7 day) | Yes ☐ No ☐ NA ☐ | NA | |
| 6.2 | Traffic projection methodology as per IRC:108 | Yes ☐ No ☐ NA ☐ | NA | |
| 6.3 | Projected Traffic data for 20 years | Yes ☐ No ☐ NA ☐ | NA | |
| 6.4 | Current and Projected PCU | Yes ☐ No ☐ NA ☐ | | |
| 6.5 | Current and Projected TVU | Yes ☐ No ☐ NA ☐ | | |
| 6.6 | Axle load survey as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 6.7 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 6.8 | Traffic surveys monitored and reviewed bythe client | Yes ☐ No ☐ NA ☐ | NA | |
| 7 | **Reconnaissance survey** | Yes ☐ No ☐ NA ☐ | NA | |
| 7.1 | Road Inventory as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 7.2 | Review of Road Inventory Survey by client | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 7.3 | Geometric Features of the Existing Road<br>• Design Speed<br>• Sight distance elements<br>• Horizontal Alignment Details<br>• Vertical Alignment Details<br>• Height of Embankment | Yes ☐ No ☐ NA ☐ | NA | |
| 7.4 | Topographical Survey as per IRC:SP:19 using LiDAR or equivalent technology<br>• Gradient<br>• Terrain | Yes ☐ No ☐ NA ☐ | NA | |
| 7.5 | Review of topographical survey by client | Yes ☐ No ☐ NA ☐ | NA | |
| 7.6 | Pavement composition and condition survey as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 7.7 | Geological Survey<br>• Geological Map of the Area<br>• Seismicity | Yes ☐ No ☐ NA ☐ | NA | |
| 7.8 | Climatic Conditions<br>• Temperature<br>• Rainfall<br>• Wind | Yes ☐ No ☐ NA ☐ | NA | |
| 7.9 | Land Use along the existing alignment<br>• Map of the Project Area depicting Agricultural/Habitation/Forest Area | Yes ☐ No ☐ NA ☐ | NA | |
| 7.10 | Details of Existing Structures<br>• Map of the Project Area depicting Hutments/Buildings/Temples/Public Building/Any Other Significant Structure | Yes ☐ No ☐ NA ☐ | NA | |
| 7.11 | Inventory and condition survey of culverts | Yes ☐ No ☐ NA ☐ | NA | |
| 7.12 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 8 | **Geotechnical Survey** | Yes ☐ No ☐ NA ☐ | NA | |
| 8.1 | Geo-technical and sub-soil explorations asper IRC:78 | Yes ☐ No ☐ NA ☐ | NA | |
| 8.2 | Number of Bore holes dug (holds for every pier and abutment) | Yes ☐ No ☐ NA ☐ | | |
| 8.3 | Review of geo-technical and sub-soil explorations by client | Yes ☐ No ☐ NA ☐ | NA | |
| 8.4 | Field testing, soil sampling, laboratory testing as per IRC:78 | Yes ☐ No ☐ NA ☐ | NA | |
| 8.5 | Recommendation of Foundation Type and Depth | Yes ☐ No ☐ NA ☐ | | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 8.6 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 9 | **Hydraulic & Hydrological Survey** | Yes ☐ No ☐ NA ☐ | NA | |
| 9.1 | Hydrological investigations as per IRC:5 and IRC: 13 | Yes ☐ No ☐ NA ☐ | NA | |
| 9.2 | High Flood Level specified | Yes ☐ No ☐ NA ☐ | NA | |
| 9.3 | Depth of Water Table specified | Yes ☐ No ☐ NA ☐ | NA | |
| 9.4 | Ponded Water Level specified | Yes ☐ No ☐ NA ☐ | NA | |
| 9.5 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 9.6 | Review of Hydrological Survey by the client | Yes ☐ No ☐ NA ☐ | NA | |
| **10** | **Materials Survey** | Yes ☐ No ☐ NA ☐ | NA | |
| 10.1 | Materials Survey conducted as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 10.2 | Sources of Naturally Occurring Aggregates specified<br>• Details of Borrow Pits with Distance from Project Site<br>• Cost of Material/Transportation | Yes ☐ No ☐ NA ☐ | | |
| 10.3 | Sources of Manufactured Items specified<br>• Details of Suppliers with Distance from Project Site<br>• Cost of Material/Transportation | Yes ☐ No ☐ NA ☐ | NA | |
| 10.4 | Source of Water for construction specifiedas per IS:456 | Yes ☐ No ☐ NA ☐ | NA | |
| 10.5 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 11 | **Determination of whether ROB or RUB is appropriate** | Yes ☐ No ☐ NA ☐ | NA | |
| 11.1 | Justification of whether ROB or RUB should be built | Yes ☐ No ☐ NA ☐ | NA | |
| 11.2 | Review of justification by client | Yes ☐ No ☐ NA ☐ | NA | |
| 12 | **Alignment Options Study** | Yes ☐ No ☐ NA ☐ | NA | |
| 12.1 | At least two alignments proposed<br>• Details of Alignments on Map | Yes ☐ No ☐ NA ☐ | NA | |
| 12.2 | Review of options with client | Yes ☐ No ☐ NA ☐ | NA | |
| 12.2.1 | Review of options with local authority | Yes ☐ No ☐ NA ☐ | NA | |
| 12.3 | Length of the project along proposed alignment options | Yes ☐ No ☐ NA ☐ | NA | |
| 12.4 | Land Acquisition required along alignment options | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 12.5 | Cost Estimates of alternatives | Yes ☐ No ☐ NA ☐ | NA | |
| 12.6 | Recommended Alignment with Justification | Yes ☐ No ☐ NA ☐ | | |
| 12.7 | Skew Angle of Proposed Alignment Specified | Yes ☐ No ☐ NA ☐ | | |
| 12.7.1 | Environmental impact of each option | Yes ☐ No ☐ NA ☐ | | |
| 12.7.2 | Review of road geometry and safety for each option | Yes ☐ No ☐ NA ☐ | NA | |
| 12.9 | Traffic Diversion Route Specified | Yes ☐ No ☐ NA ☐ | NA | |
| 12.10 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 13 | **Environmental screening/ preliminary environmental assessment** | Yes ☐ No ☐ NA ☐ | NA | |
| 13.1 | Analysis basis Initial Environment Examination in IRC: SP: 19 | Yes ☐ No ☐ NA ☐ | NA | |
| 13.2 | Recommended feasible mitigation measures | Yes ☐ No ☐ NA ☐ | NA | |
| 14 | **Initial social assessment/ preliminary LA resettlement plan** | Yes ☐ No ☐ NA ☐ | NA | |
| 14.1 | Analysis basis Initial Environment Examination in IRC: SP: 19 | Yes ☐ No ☐ NA ☐ | NA | |
| 14.2 | Details of consultation with potentially affected persons | Yes ☐ No ☐ NA ☐ | NA | |
| 14.3 | Details of consultation with local NGOs | Yes ☐ No ☐ NA ☐ | NA | |
| 14.4 | Details of consultation with municipal authorities | Yes ☐ No ☐ NA ☐ | NA | |
| 14.5 | Preliminary resettlement plan | Yes ☐ No ☐ NA ☐ | NA | |
| 14.6 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 15 | **Cost estimates** | Yes ☐ No ☐ NA ☐ | NA | |
| 15.1 | Item rates and rate analysis | Yes ☐ No ☐ NA ☐ | NA | |
| 15.2 | Escalation | Yes ☐ No ☐ NA ☐ | NA | |
| 16 | **Economic and financial analysis** | Yes ☐ No ☐ NA ☐ | NA | |
| 16.1 | Estimated cost details | Yes ☐ No ☐ NA ☐ | NA | |
| 16.2 | Projected revenues details | Yes ☐ No ☐ NA ☐ | NA | |
| 16.3 | Assumptions stated | Yes ☐ No ☐ NA ☐ | NA | |
| 16.4 | Analysis and results<br>• IRR<br>• Sensitivity Analysis<br>• Financial Viability | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 16.5 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 17 | **Strip Plan** | | NA | |
| 17.1 | Details of center line of proposed structure | Yes ☐ No ☐ NA ☐ | NA | |
| 17.2 | Details of existing RoW | Yes ☐ No ☐ NA ☐ | | |
| 17.3 | Details of proposed RoW | Yes ☐ No ☐ NA ☐ | | |
| 17.4 | Details about ownership of land to be acquired | Yes ☐ No ☐ NA ☐ | NA | |
| 17.5 | Strip plan basis reconnaissance and topographic surveys | Yes ☐ No ☐ NA ☐ | NA | |
| 17.6 | Strip plan reviewed and approved by the client | Yes ☐ No ☐ NA ☐ | NA | |
| 17.7 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 11 | **Strip plan- additional details added** | Yes ☐ No ☐ NA ☐ | NA | |
| 11.1 | Details of centreline, existing structures, road furniture and other features | Yes ☐ No ☐ NA ☐ | NA | |
| 11.2 | Widening scheme | Yes ☐ No ☐ NA ☐ | NA | |
| 11.3 | New construction/ reconstruction of structures and amenities | Yes ☐ No ☐ NA ☐ | NA | |
| 11.4 | Existing and proposed right of way | Yes ☐ No ☐ NA ☐ | NA | |
| 11.5 | Clearances impacting each chainage | Yes ☐ No ☐ NA ☐ | NA | |

# DPR Checklist – Stage 3 – LA and Clearances I Report (Structures)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Environment Clearance** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Requirement for environment clearance identified | Yes ☐ No ☐ NA ☐ | NA | |
| 2.2 | Date/ Details of Initial consultation with competent authority | Yes ☐ No ☐ NA ☐ | | |
| 2.3 | Date of submission of draft EIA report/ proposal for clearance | Yes ☐ No ☐ NA ☐ | NA | |
| 2.4 | Review of proposal/ EIA report by client | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **Forest Clearance** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Requirement for forest clearance identified | Yes ☐ No ☐ NA ☐ | NA | |
| 3.2 | Date/ Details of initial consultation with competent authority | Yes ☐ No ☐ NA ☐ | | |
| 3.3 | Details/cost of trees being felled basis concerned District Forest Office | Yes ☐ No ☐ NA ☐ | | |
| 3.4 | Date of submission of proposal for forest clearance | Yes ☐ No ☐ NA ☐ | NA | |
| 3.5 | Review of proposal by client | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Wildlife Clearance** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Requirement for wildlife clearance identified | Yes ☐ No ☐ NA ☐ | NA | |
| 4.2 | Date/ Details of initial consultation with competent authority | Yes ☐ No ☐ NA ☐ | | |
| 4.3 | Details/cost of trees being felled basis concerned District Forest Office | Yes ☐ No ☐ NA ☐ | | |
| 4.4 | Date of submission of proposal for wildlife clearance | Yes ☐ No ☐ NA ☐ | | |
| 4.5 | Review of proposal by client | Yes ☐ No ☐ NA ☐ | NA | |
| 5 | **Utility Clearances (Electricity)** | Yes ☐ No ☐ NA ☐ | NA | |
| 5.1 | Identification of overground utilities | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 5.2 | Identification of underground utilities using GPR, Induction Locator or equivalent technologies | Yes ☐ No ☐ NA ☐ | NA | |
| 5.3 | Name/ Details of consultation with local authority/ people | Yes ☐ No ☐ NA ☐ | | |
| 5.4 | Utility relocation plan with existing / proposed location showing existing RoWand topographic details | Yes ☐ No ☐ NA ☐ | NA | |
| 5.5 | Cost for relocation as per authority | Yes ☐ No ☐ NA ☐ | | |
| 5.6 | Date of proposal submission to competent authority | Yes ☐ No ☐ NA ☐ | | |
| 5.7 | Review of utility relocation plan/ proposalby client | Yes ☐ No ☐ NA ☐ | NA | |
| 6 | **Utility Clearances (Water)** | Yes ☐ No ☐ NA ☐ | NA | |
| 6.1 | Identification of overground utilities in RoW | Yes ☐ No ☐ NA ☐ | NA | |
| 6.2 | Identification of underground utilities using GPR, Induction Locator or equivalent technologies | Yes ☐ No ☐ NA ☐ | NA | |
| 6.3 | Name/ Details of consultation with local authority/ people | Yes ☐ No ☐ NA ☐ | | |
| 6.4 | Utility relocation plan with existing / proposed location showing existing RoWand topographic details | Yes ☐ No ☐ NA ☐ | NA | |
| 6.5 | Cost for relocation as per authority | Yes ☐ No ☐ NA ☐ | | |
| 6.6 | Date of proposal submission to competent authority | Yes ☐ No ☐ NA ☐ | NA | |
| 6.7 | Review of utility relocation plan/ proposalby client | Yes ☐ No ☐ NA ☐ | NA | |
| 7 | **Utility Clearances (Others)** | Yes ☐ No ☐ NA ☐ | NA | |
| 7.1 | Identification of over ground utilities in RoW | Yes ☐ No ☐ NA ☐ | NA | |
| 7.2 | Identification of underground utilities using GPR, Induction Locator or equivalent technologies | Yes ☐ No ☐ NA ☐ | NA | |
| 7.3 | Name/ Details of consultation with local authority/ people | Yes ☐ No ☐ NA ☐ | | |
| 7.4 | Utility relocation plan with existing / proposed location showing existing RoWand topographic details | Yes ☐ No ☐ NA ☐ | NA | |
| 7.5 | Cost for relocation as per authority | Yes ☐ No ☐ NA ☐ | | |
| 7.6 | Date of proposal submission to competent authority | Yes ☐ No ☐ NA ☐ | | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 7.7 | Review of utility relocation plan/ proposalby client | Yes ☐ No ☐ NA ☐ | NA | |
| 8 | **Railway Clearances** | Yes ☐ No ☐ NA ☐ | NA | |
| 8.1 | Identification of ROB/ RUB on project corridor | Yes ☐ No ☐ NA ☐ | NA | |
| 8.2 | Initial consultation with competent authority | Yes ☐ No ☐ NA ☐ | NA | |
| 8.3 | Date of proposal submission to competent authority | Yes ☐ No ☐ NA ☐ | | |
| 8.4 | Review of GAD/ proposal by client | Yes ☐ No ☐ NA ☐ | NA | |
| 9 | **Other Clearances** | Yes ☐ No ☐ NA ☐ | NA | |
| 9.1 | Requirement for other clearances identified | Yes ☐ No ☐ NA ☐ | NA | |
| 9.2 | Date of proposal submission to competent authority | Yes ☐ No ☐ NA ☐ | | |
| 9.3 | Review of proposal by client | Yes ☐ No ☐ NA ☐ | NA | |
| 10 | **Land Acquisition** | Yes ☐ No ☐ NA ☐ | NA | |
| 10.1 | Detailed schedule about acquisition of landholdings as per land records | Yes ☐ No ☐ NA ☐ | NA | |
| 10.2 | Consultation with affected persons | Yes ☐ No ☐ NA ☐ | NA | |
| 10.3 | Name/ Details of consultation with NGOs | Yes ☐ No ☐ NA ☐ | | |
| 10.4 | Name/ Details of consultation with concerned government agencies | Yes ☐ No ☐ NA ☐ | | |
| 10.5 | Total land required, land area already available , land to be acquired identified | Yes ☐ No ☐ NA ☐ | | |
| 10.6 | Review of land acquisition using digital cadastral map by client | Yes ☐ No ☐ NA ☐ | NA | |
| 11 | **Strip plan- additional details added** | Yes ☐ No ☐ NA ☐ | NA | 11 |
| 11.1 | Details of centreline, existing structures, road furniture and other features | Yes ☐ No ☐ NA ☐ | NA | 11.1 |
| 11.2 | Widening scheme | Yes ☐ No ☐ NA ☐ | NA | 11.2 |
| 11.3 | New construction/ reconstruction of structures and amenities | Yes ☐ No ☐ NA ☐ | NA | 11.3 |
| 11.4 | Existing and proposed right of way | Yes ☐ No ☐ NA ☐ | NA | 11.4 |
| 11.5 | Clearances impacting each chainage | Yes ☐ No ☐ NA ☐ | NA | 11.5 |
| 12 | **Conclusions and recommendations** | Yes ☐ No ☐ NA ☐ | NA | |
| 12.1 | Conclusions and recommendations | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 12.2 | Report fulfils project objectives and scopeas per RFP | Yes ☐ No ☐ NA ☐ | NA | |
| 12.3 | Report reviewed for errors and omissions | Yes ☐ No ☐ NA ☐ | NA | |
| 12.4 | Compliance report prepared on client observations | Yes ☐ No ☐ NA ☐ | NA | |

## DPR Checklist – Stage 4 – Detailed Project Report (Structures)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Project background** | Yes ☐ No ☐ NA ☐ | NA | |
| 1.1 | Project description<br>• Existing LC number<br>• Start and End Chainage<br>• Village/District | Yes ☐ No ☐ NA ☐ | | |
| 1.2 | Project location map<br>• On State Map<br>• On District Map<br>• Latitude & Longitude Coordinatesof the LC | Yes ☐ No ☐ NA ☐ | | |
| 1.3 | Details of Existing Level Crossing<br>• Number of Railway Tracks<br>• Type of Railway Tracks (Broad/Metre/Narrow)<br>• No. of trains per day | Yes ☐ No ☐ NA ☐ | | |
| 1.4 | Justification for need of an ROB/RUB (on basis of TVU count) | Yes ☐ No ☐ NA ☐ | NA | |
| 1.5 | Overview of land use plans | Yes ☐ No ☐ NA ☐ | NA | |
| 1.6 | Overview of existing pavement conditions<br>• Number of Lanes<br>• Type of Pavement (Flexible/Rigid/Surfaced/Unsurfaced) | Yes ☐ No ☐ NA ☐ | | |
| 1.7 | Existing right of way details | Yes ☐ No ☐ NA ☐ | | |
| 1.8 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Social analysis of the project** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Project impact on stakeholders such as local people | Yes ☐ No ☐ NA ☐ | NA | |
| 2.2 | Project impact on residential, commercialand public properties | Yes ☐ No ☐ NA ☐ | NA | |
| 2.3 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 3 | **Reconnaissance survey** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Geometric Features of the Existing Road<br>• Design Speed<br>• Sight distance details<br>• Horizontal Alignment Details<br>• Vertical Alignment Details<br>• Height of Embankment | Yes ☐ No ☐ NA ☐ | | |
| 3.2 | Topographical Survey using LiDAR or equivalent technology as per IRC:SP:19<br>• Gradient<br>• Terrain | Yes ☐ No ☐ NA ☐ | NA | |
| 3.3 | Pavement composition and condition survey as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 3.4 | Geological Survey<br>• Geological Map of the Area<br>• Seismicity | Yes ☐ No ☐ NA ☐ | NA | |
| 3.5 | Climatic Conditions<br>• Temperature<br>• Rainfall<br>• Wind | Yes ☐ No ☐ NA ☐ | NA | |
| 3.6 | Land Use along the existing alignment<br>• Map of the Project Area depicting Agricultural/Habitation/Forest Area | Yes ☐ No ☐ NA ☐ | NA | |
| 3.7 | Details of Existing Structures<br>• Map of the Project Area depicting Hutments/Buildings/Temples/Public Building/Any Other Significant Structure | Yes ☐ No ☐ NA ☐ | NA | |
| 3.8 | Inventory and condition survey of culverts | Yes ☐ No ☐ NA ☐ | NA | |
| 3.9 | Geo-technical and sub-soil explorations asper IRC:78 | Yes ☐ No ☐ NA ☐ | NA | |
| 3.10 | Number of Bore holes dug (holds for every pier and abutment) | Yes ☐ No ☐ NA ☐ | | |
| 3.11 | Field testing, soil sampling, laboratory testing as per IRC: 78 | Yes ☐ No ☐ NA ☐ | NA | |
| 3.12 | Recommendation of Foundation Type and Depth | Yes ☐ No ☐ NA ☐ | | |
| 3.13 | Hydraulic and Hydrological investigationsas per IRC:5 | Yes ☐ No ☐ NA ☐ | NA | |
| 3.14 | High Flood Level specified | Yes ☐ No ☐ NA ☐ | NA | |
| 3.15 | Depth of Water Table specified | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 3.16 | Ponded Water Level specified | Yes ☐ No ☐ NA ☐ | NA | |
| 3.17 | Materials Survey conducted as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 3.18 | Sources of Naturally Occurring Aggregates specified<br>• Details of Borrow Pits with Distance from Project Site<br>• Cost of Material/Transportation | Yes ☐ No ☐ NA ☐ | | |
| 3.19 | Sources of Manufactured Items specified<br>• Details of Suppliers with Distance from Project Site<br>• Cost of Material/Transportation | Yes ☐ No ☐ NA ☐ | NA | |
| 3.19.1 | Sources of environmentally friendly construction materials identified as per MoRT&H circular | Yes ☐ No ☐ NA ☐ | NA | |
| 3.20 | Source of Water for construction specifiedas per IS:456 | Yes ☐ No ☐ NA ☐ | NA | |
| 3.21 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Traffic surveys and analysis** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Classified traffic volume counts using IHMCL data (7 day) | Yes ☐ No ☐ NA ☐ | NA | |
| 4.2 | Traffic projection as per IRC:108 | Yes ☐ No ☐ NA ☐ | NA | |
| 4.3 | Projected Traffic data for 20 years | Yes ☐ No ☐ NA ☐ | NA | |
| 4.4 | Current and Projected PCU | Yes ☐ No ☐ NA ☐ | | |
| 4.5 | Current and Projected TVU | Yes ☐ No ☐ NA ☐ | | |
| 4.6 | Axle load survey as per IRC:SP:19 | Yes ☐ No ☐ NA ☐ | NA | |
| 4.7 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 5 | **Determination of whether ROB or RUB is appropriate** | Yes ☐ No ☐ NA ☐ | NA | |
| 5.1 | Justification of whether ROB or RUB should be built | Yes ☐ No ☐ NA ☐ | NA | |
| 6 | **Alignment Options Study** | Yes ☐ No ☐ NA ☐ | NA | |
| 6.1 | At least two alignments proposed<br>• Details of Alignments on Map | Yes ☐ No ☐ NA ☐ | NA | |
| 6.2 | Length of the project along proposed alignment options | Yes ☐ No ☐ NA ☐ | NA | |
| 6.3 | Land Acquisition required along alignment options | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 6.4 | Cost Estimates of alternatives | Yes ☐ No ☐ NA ☐ | NA | |
| 6.5 | Recommended Alignment with Justification | Yes ☐ No ☐ NA ☐ | | |
| 6.6 | Skew Angle of Proposed Alignment Specified | Yes ☐ No ☐ NA ☐ | | |
| 6.7 | Traffic Diversion Route Specified | Yes ☐ No ☐ NA ☐ | NA | |
| 6.8 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 7 | **Design Specifications** | Yes ☐ No ☐ NA ☐ | NA | |
| 7.1 | Number of Lanes | Yes ☐ No ☐ NA ☐ | | |
| 7.2 | Width of ROB<br>• Width of Carriageway<br>• Width of Safety Kerbs<br>• Width of Footpath<br>• Any other | Yes ☐ No ☐ NA ☐ | | |
| 7.3 | Proposed Number of Lanes on ROB in line with PCU as per latest MoRTH guidelines | Yes ☐ No ☐ NA ☐ | NA | |
| 7.4 | Proposed Length of the Project<br>• Length of ROB<br>• Length of Viaduct<br>• Length of RE Wall<br>• Length of Approach Road<br>• Length of Service Road | Yes ☐ No ☐ NA ☐ | | |
| 7.5 | Span Arrangement<br>• Span Length<br>• Number of Spans | Yes ☐ No ☐ NA ☐ | | |
| 7.6 | Are all spans of standardised length as per Railways standards (https://ircep.gov.in/RCApproval/)<br>• If non-standardised, suitable justification provided | Yes ☐ No ☐ NA ☐ | NA | |
| 7.7 | Details of Proposed Superstructure Design<br>• Type<br>• Details of Material Use Proposed<br>• Drawings of Cross-Sections | Yes ☐ No ☐ NA ☐ | NA | |
| 7.8 | Details of Proposed Substructure DesignType<br>• Details of Material Use Proposed<br>• Drawings of Cross-Sections | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 7.9 | Details of Proposed Pavement Design<br>Type<br>• Details of Material Use Proposed<br>• Thickness<br>• Design MSA<br>• Drawings of Cross-Sections | Yes ☐ No ☐ NA ☐ | NA | |
| 7.10 | Details of Drainage Structures Proposed | Yes ☐ No ☐ NA ☐ | NA | |
| 7.11 | Any other details relevant to the project | Yes ☐ No ☐ NA ☐ | NA | |
| 8 | **Cost estimates** | Yes ☐ No ☐ NA ☐ | NA | |
| 8.1 | Summary of Cost Estimates (Refer following subsection) | Yes ☐ No ☐ NA ☐ | | |
| 8.2 | Detailed Abstract of Cost | Yes ☐ No ☐ NA ☐ | NA | |
| 8.3 | Detailed Bills of Quantity | Yes ☐ No ☐ NA ☐ | NA | |
| 8.4 | Detailed Rate Analysis | Yes ☐ No ☐ NA ☐ | NA | |
| 9 | **Financial Viability** | Yes ☐ No ☐ NA ☐ | NA | |
| 9.1 | Estimated cost details | Yes ☐ No ☐ NA ☐ | NA | |
| 9.2 | Projected revenues details | Yes ☐ No ☐ NA ☐ | NA | |
| 9.3 | Assumptions stated | Yes ☐ No ☐ NA ☐ | NA | |
| 9.4 | Analysis and results<br>• IRR<br>• Sensitivity Analysis<br>• Financial Viability | Yes ☐ No ☐ NA ☐ | | |
| 10 | **Land Acquisition Study** | Yes ☐ No ☐ NA ☐ | NA | |
| 10.1 | Land Acquisition Details<br>• Total Land Required<br>• Land Area already available<br>• Area of Land to be Acquired | Yes ☐ No ☐ NA ☐ | | |
| 10.3 | Details of LA Cost | Yes ☐ No ☐ NA ☐ | | |
| 11 | **Utility Shifting Study** | Yes ☐ No ☐ NA ☐ | NA | |
| 11.1 | Results of GPR investigation | Yes ☐ No ☐ NA ☐ | NA | |
| 11.2 | Utility relocation plan with existing / proposed location showing existing RoWand topographic details | Yes ☐ No ☐ NA ☐ | NA | |
| 11.3 | Cost for relocation as per authority | Yes ☐ No ☐ NA ☐ | | |
| 12 | **General Arrangement Drawing** | Yes ☐ No ☐ NA ☐ | NA | |
| 12.1 | Elevation of Railway Portion | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 12.2 | Plan of Railway Portion | Yes ☐ No ☐ NA ☐ | NA | |
| 12.3 | General Elevation | Yes ☐ No ☐ NA ☐ | NA | |
| 12.4 | General Plan (showing complete ROB/RUB along with diversion) | Yes ☐ No ☐ NA ☐ | NA | |
| 12.5 | Key Plan | Yes ☐ No ☐ NA ☐ | NA | |
| 12.6 | Cross-Section of Railway Portion | Yes ☐ No ☐ NA ☐ | NA | |
| 12.7 | 3D engineered models of:<br>• Existing structure, if any<br>• Proposed structure<br>• Utilities and other features in RoW | Yes ☐ No ☐ NA ☐ | | |

## Cost Summary Table

| S.No. | Particulars | Cost Estimate(in '000) |
|---|---|---|
| *1* | *Cost of ROB Portion* | |
| | Foundation | |
| | Substructure | |
| | Superstructure | |
| | **Total-ROB Portion** | |
| | | |
| *2* | *Cost of Viaduct* | |
| | Foundation | |
| | Substructure | |
| | Superstructure | |
| | **Total-Viaduct** | |
| | | |
| *3* | *Cost of Approach Road* | |
| | | |
| *4* | *Cost of RE Wall* | |
| | | |
| *5* | *Cost of Service Road* | |
| | | |
| *6* | *Miscellaneous Costs* | |
| | Cost of Subway | |
| | Cost of Toll Plaza | |
| | Cost of Culverts | |
| | Any Other Costs | |
| | | |
| | **Civil Cost of the Project** | |
| *7* | *Contingencies @x%* | |
| | **Total Civil Cost** | |
| | | |
| *8* | *Supervision Charges @x%* | |
| *9* | *Cost of Quality Control @x%* | |
| *10* | *Maintenance Charges @x%* | |
| *11* | *Escalation Costs @x%* | |
| *12* | *Land Acquisition Costs* | |
| *13* | *Utility Shifting Costs* | |
| *14* | *Any Other Costs* | |
| | | |
| | **Total Cost of the Project** | |

## DPR Checklist – Stage 5 – Technical Schedules (Structures)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | Bid documents- EPC | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Bid documents- Other, if any** | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **Draft concession agreement** | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **Schedule C - Project facilities** | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Schedule D - Specifications and standards** | Yes ☐ No ☐ NA ☐ | NA | |
| 5 | **Any other relevant details** | Yes ☐ No ☐ NA ☐ | NA | |

## DPR Checklist – Stage 6 – LA and Clearances II Report (Structures)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Environment Clearance** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Details of public hearings completed | Yes ☐ No ☐ NA ☐ | | |
| 2.2 | Date of final environment clearance by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 3 | **Forest Clearance** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Date/ Details of Joint site inspection with DFO/ competent authority | Yes ☐ No ☐ NA ☐ | | |
| 3.2 | Date of Stage I forest clearance approvalby competent authority | Yes ☐ No ☐ NA ☐ | | |
| 3.3 | Date of final forest clearance approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 4 | **Wildlife Clearance** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Date/ Details of joint site inspection with DFO/ competent authority | Yes ☐ No ☐ NA ☐ | | |
| 4.2 | Date of final wildlife clearance approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 5 | **Utility Clearances (Electricity)** | Yes ☐ No ☐ NA ☐ | NA | |
| 5.1 | Date/ Details of Joint site inspection with competent authority | Yes ☐ No ☐ NA ☐ | | |
| 5.2 | Date of estimate submission by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 5.3 | Date of estimate approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 5.4 | Approved utility shifting proposal | Yes ☐ No ☐ NA ☐ | | |
| 5.5 | Details of approved contractors, SoR and deposit details for user agency | Yes ☐ No ☐ NA ☐ | NA | |
| 5.6 | Utilities checklist, no upgradation certificate attached | Yes ☐ No ☐ NA ☐ | | |
| 6.2 | Date of estimate submission by competent authority | Yes ☐ No ☐ NA ☐ | | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 6.3 | Date of estimate approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 6.4 | Approved utility shifting proposal | Yes ☐ No ☐ NA ☐ | | |
| 6.5 | Details of approved contractors, SoR and deposit details for user agency | Yes ☐ No ☐ NA ☐ | NA | |
| 6.6 | Utilities checklist, no upgradation certificate attached | Yes ☐ No ☐ NA ☐ | | |
| 7.2 | Date of estimate submission by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 7.3 | Date of estimate approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 7.4 | Approved utility shifting proposal | Yes ☐ No ☐ NA ☐ | | |
| 7.5 | Details of approved contractors, SoR and deposit details for user agency | Yes ☐ No ☐ NA ☐ | NA | |
| 7.6 | Utilities checklist, no upgradation certificate attached | Yes ☐ No ☐ NA ☐ | | |
| 8.2 | Date of final approval of GAD by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 9 | **Other Clearances** | Yes ☐ No ☐ NA ☐ | NA | |
| 9.1 | Date of final approval by competent authority | Yes ☐ No ☐ NA ☐ | | |
| 10 | **Land Acquisition** | Yes ☐ No ☐ NA ☐ | NA | |
| 10.1 | Draft 3a notification submitted | Yes ☐ No ☐ NA ☐ | NA | |
| 10.2 | Review of 3a notification by client | Yes ☐ No ☐ NA ☐ | NA | |
| 10.3 | Date of 3a gazette notification | Yes ☐ No ☐ NA ☐ | | |
| 10.4 | Draft 3a notification submitted | Yes ☐ No ☐ NA ☐ | NA | |
| 10.5 | Review of 3A notification by client | Yes ☐ No ☐ NA ☐ | NA | |
| 10.6 | Date of 3A gazette notification | Yes ☐ No ☐ NA ☐ | | |
| 10.7 | Date of Joint Measurement Survey with competent authority | Yes ☐ No ☐ NA ☐ | | |
| 10.7.1 | Date of survey | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.2 | Land type –by survey number | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.3 | Nature of Land –by survey number | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.4 | Ownership status of plots- by survey number | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.5 | Verification of area to be acquired – by survey number | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 10.7.6 | List of structures on each plot | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.7 | Sketches of updated alignment | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.8 | Verification from Land revenue department | Yes ☐ No ☐ NA ☐ | NA | |
| 10.7.9 | Verification by CALA office | Yes ☐ No ☐ NA ☐ | NA | |

# DPR Checklist – Stage 7 – Award determination (Structures)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Village level summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Total private and public land being acquired | Yes ☐ No ☐ NA ☐ | NA | |
| 2.2 | Variation in area and nature of land against 3D with justification | Yes ☐ No ☐ NA ☐ | NA | |
| 2.3 | Method used by CALA to arrive at award | Yes ☐ No ☐ NA ☐ | NA | |
| 2.4 | Date of award by CALA and approvalby NHIDCL along with valuation report | | | |
| 2.5 | Total award calculated and details of deviation from RFCTLARR act | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **In detail** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Updated land acquisition tracker with parcel-wise status of:<br>• Notifications<br>• Award<br>• Disbursement | Yes ☐ No ☐ NA ☐ | NA | |
| 3.2 | Valuation report and details of award calculation- verification by state authority to be included | Yes ☐ No ☐ NA ☐ | NA | |
| 3.3 | Claims report | Yes ☐ No ☐ NA ☐ | NA | |
| 3.4 | Copies of notifications published | Yes ☐ No ☐ NA ☐ | NA | |
| 3.5 | Copies of land possession certificates received | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Conclusions and recommendations** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Conclusions and recommendations | Yes ☐ No ☐ NA ☐ | NA | |
| 4.2 | Report fulfils project objectives and scope as per RFP | Yes ☐ No ☐ NA ☐ | NA | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 4.3 | Report reviewed for errors and omissions | Yes ☐ No ☐ NA ☐ | NA | |
| 4.4 | Compliance report prepared on client observations | Yes ☐ No ☐ NA ☐ | NA | |

# DPR Checklist – Stage 8 – Land possession report (Structures)

| General Details | |
|---|---|
| Project Name | |
| Consultant's Name | |
| Date of Review | |

| S.No | SECTION OF THE REPORT | YES/NO/NA | Details/ Specifications | Remarks |
|---|---|---|---|---|
| 1 | **Executive Summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2 | **Village level summary** | Yes ☐ No ☐ NA ☐ | NA | |
| 2.1 | Total private and public land being acquired | Yes ☐ No ☐ NA ☐ | NA | |
| 2.2 | Date of final award by CALA and approvalby NHIDCL | | | |
| 2.3 | Status of disbursement on date of receiptof Land possession certificate | Yes ☐ No ☐ NA ☐ | NA | |
| 2.4 | Key issues being faced in completing land acquisition, if any | Yes ☐ No ☐ NA ☐ | NA | |
| 3 | **In detail** | Yes ☐ No ☐ NA ☐ | NA | |
| 3.1 | Updated land acquisition tracker with status of:<br>• Notifications<br>• Award<br>• Disbursement | Yes ☐ No ☐ NA ☐ | NA | |
| 3.2 | Final award and claims report | Yes ☐ No ☐ NA ☐ | NA | |
| 3.3 | Copies of notifications published, land possession certificates received | Yes ☐ No ☐ NA ☐ | NA | |
| 4 | **Conclusions and recommendations** | Yes ☐ No ☐ NA ☐ | NA | |
| 4.1 | Conclusions and recommendations | Yes ☐ No ☐ NA ☐ | NA | |
| 4.2 | Report fulfils project objectives and scopeas per RFP | Yes ☐ No ☐ NA ☐ | NA | |
| 4.3 | Report reviewed for errors and omissions | Yes ☐ No ☐ NA ☐ | NA | |
| 4.4 | Compliance report prepared on client observations | Yes ☐ No ☐ NA ☐ | NA | |
| **5** | **GIS Map containing digitised details of land parcels acquired with all relevant details** | **Yes ☐ No ☐ NA ☐** | **NA** | |