

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED



REQUEST FOR PROPOSAL (RFP) DOCUMENT

FOR

CONTRACT: HRIDC/TNL/HORC/2020

Detailed Design, Geological Mapping, Geo Technical Investigations, and other ancillary works in connection with construction of Tunnel and its approaches in Sohna-Manesar Section of 'Haryana Orbital Rail Corridor' Project in the state of Haryana.

February 2020

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED

Corporate Office: SCO 17-19, 3rd Floor, Sector 17A, Chandigarh.

Website:

www.hridc.co.in

<https://etenders.hry.nic.in>

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SECTION- I: Notice Inviting Tender

The Haryana Rail Infrastructure Development Corporation invites on line bids from eligible bidders on the website <https://etenders.hry.nic.in> for the works as detailed in the table. e-Tender is invited for below mentioned work in single stage two cover system i.e. for Technical Bid (online Bid under PQQ/ Technical Envelope) and Financial Bid (comprising of price bid Proposal under online available Commercial Envelope):-

Sr. No.	Name of work	Total Cost (in Rs)	Completion Period	EMD (in Rs)	Cost of Tender Document	E-Service Fees
1.	Detailed Design, Geological Mapping, Geo Technical Investigations, and other ancillary works in connection with construction of Tunnel and its approaches in Sohna-Manesar Section of 'Haryana Orbital Rail Corridor' Project in the state of Haryana.	1.09Cr	4 months	2,04,500/-	Rs.10000/-	Rs. 1000/- + GST

Under this process, the Pre-qualification/ Technical online bid Application as well as online Price Bid shall be invited at single stage under two covers i.e. PQQ/Technical & Commercial Envelope. Eligibility and qualification of the Applicant will be first examined based on the details submitted online under first cover (PQQ or Technical) with respect to eligibility and qualification criteria prescribed in this Tender document. The Price Bid under the second cover shall be opened for only those Applicants whose PQQ/ Technical Applications are responsive to eligibility and qualifications requirements as per Tender document.

The payment for Tender Document Fee and e-Service Fee shall be made by eligible bidders online directly through Debit Cards & Internet Banking Accounts and the payment for EMD can be made online directly through RTGS/NEFT Please refer to 'Online Payment Guideline' available at the Single e-Procurement portal of GoH (Govt. of Haryana) and also mentioned under the Tender Document.

Intending bidders will be mandatorily required to online sign-up (create user account) on the website <https://etenders.hry.nic.in> to be eligible to participate in the e-Tender. He/She will be required to make online payment of above mentioned EMD fee. The intended bidder, who fails to pay EMD fee under the stipulated time frame, shall not be allowed to submit his / her bids for the respective event / Tenders. The tenderer should refer to **Annexure to NIT** for instructions regarding Electronic Tendering System.

The interested bidders must remit the funds at least T+1 working day (Transaction day + One working Day); and make payment via RTGS /NEFT to the beneficiary account number specified under the online generated challan. The intended bidder / Agency thereafter will be able to successfully verify their payment online, and submit their bids on or before the expiry date & time of the respective events/Tenders at <https://haryanaeprocurement.gov.in>.

The interested bidders shall have to pay mandatorily e-Service fee (under document fee – Non refundable) of Rs.1000/- (Rupee One Thousand Only) plus GST online by using the service of secure electronic gateway.

The contractual Agencies can submit their tender documents as per the dates mentioned in the key dates schedule.

Key Dates Schedule

Sr. No.	Item	Start date and time	Expiry Date and Time
1.	Release of tender	13.02.2020 at 5:00 PM	13.03.2020 upto 3:00 PM
2.	Tender Bid Preparation and submission	20.02.2020 at 5:00 PM	13.03.2020 upto 3:00 PM
3	Technical Bid Opening	13.03.2020 from 3:00 PM to 5:00 PM	
4	Technical Evaluation		
5	Opening of Financial Bid	Date will be separately intimated to the eligible bidders.	

Important Notes:

- 1) The Applicants/bidders have to complete ‘Application / Bid Preparation & Submission’ stage on scheduled time as mentioned above. If any Applicant / bidder fails to complete his / her aforesaid stage in the stipulated online time schedule for this stage, his / her Application/bid status will be considered as ‘Applications / bids not submitted’.
- 2) Applicant/Bidder must confirm & check his/her Application/bid status after completion of his/her all activities for e-bidding.
- 3) Applicant/Bidder can rework on his/her bids even after completion of ‘Application/Bid Preparation & submission stage’ (Application/Bidder Stage), subject to the condition that the rework must take place during the stipulated time frame of the Applicant/Bidder Stage.
- 4) In the first instance, the online payment details of tender document fee + e-Service and EMD & PQQ/Technical Envelope shall be opened. Henceforth financial bid quoted against each of the item by the shortlisted bidder/ Agency wherever required shall be opened online in the presence of such bidders/ Agency who either themselves or through

their representatives choose to be present. The bidder can submit their bids online as per the dates mentioned in the schedule/Key Dates above.

The bids shall be submitted online in two separate envelopes:

Envelope 1: Technical Bid

The bidders shall upload the documents Online as per **Annexure-II** of Instructions to Bidders in the Technical Bid.

Envelope 2: Commercial Bid

The bidders shall quote the prices as per BOQ in price bid format under Commercial Bid.

In case financial bid is submitted but EMD has not been submitted by any bidder, then bidder would be debarred from further tendering in HRIDC for a period of minimum 3 years.

CONDITONS:-

- 1) DNIT & Prequalification criteria can be seen on website and also on any working day during office hours in office of the undersigned.
- 2) Conditional tenders will not be entertained & are liable to be rejected.
- 3) In case the day of opening of tenders happens to be holiday, the tenders will be opened on the next working day. The time and place of receipt of tenders and other conditions will remain unchanged.
- 4) The undersigned reserve the right to reject any tender or all the tenders without assigning any reason.
- 5) The tender without EMD will not be opened and summarily rejected.
- 6) The jurisdiction of court will be at Panchkula/ Chandigarh.
- 7) The tender of the bidder who does not satisfy the qualification criteria in the bid documents are liable to be rejected without assigning any reason and no claim whatsoever on this account will be considered.
- 8) The bid for the work shall remain open for acceptance during the bid validity period to be reckoned from the last date of 'submission of online tender / bid. If any bidder/ renderer withdraws his bid/ tender before the said period or makes any modifications in the terms and conditions of the bid, the said earnest money shall stand forfeited. Bids would require being valid for 90 days from the date of bid. In case the last day to accept the tender happens to be holiday, validity to accept tender will be the next working day.

**DGM (Project),
HRIDC**

INSTRUCTIONS REGARDING ELECTRONIC TENDERING SYSTEM

These conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.

1. Registration of bidders on e-tendering Portal:-

All the bidders intending to participate in the tenders process online are required to get registered on the centralized e-tendering Portal i.e. <https://etenders.hry.nic.in> Please visit the website for more details.

2. Obtaining a Digital Certificate:

2.1. The Bids submitted online should be encrypted and signed electronically with a Digital Certificate to establish the identity of the bidder bidding online. These Digital Certificates are issued by an Approved Certifying Authority, by the Controller of Certifying Authorities, Government of India.

2.2. A Digital Certificate is issued upon receipt of mandatory identity (i.e. Applicant's PAN Card) and Address proofs and verification form duly attested by the Bank Manager / Post Master / Gazetted Officer. Only upon the receipt of the required documents, a digital certificate can be issued. For more details please visit the website – <https://etenders.hry.nic.in>

2.3. The bidders may obtain Class-II or III digital signature certificate from any Certifying Authority or Sub-certifying Authority authorized by the Controller of Certifying Authorities or may obtain information and application format and documents required for the issue of digital certificate from.

2.4. The bidder must ensure that he/she comply by the online available important guidelines at the portal <https://etenders.hry.nic.in> for Digital Signature Certificate (DSC) including the e-Token carrying DSCs.

Ms Manju Aggarwal .

Tehchnical Director,

Scientist-E, NIC.

Panchkula.

E - mail: a.manju@nic.in

Help Desk: 0172 – 584257, 94170-69017.

2.5. Bid for a particular tender must be submitted online using the digital certificate (Encryption & Signing), which is used to encrypt and sign the data during the stage of bid preparation. In case, during the process of a particular tender, the user loses his digital certificate (due to virus attack, hardware problem, operating system or any other problem) he will not be able to submit the bid online.

Hence, the users are advised **to keep a backup of the certificate** and also keep the copies at safe place under proper security (for its use in case of emergencies).

2.6. In case of online tendering, if the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate/power of attorney /lawful authorization to that User. The firm has to authorize a

specific individual through an authorization certificate signed by all partners to use the digital certificate as per Indian Information Technology Act 2000. Unless the certificates are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of the firm in the department tenders as per Information Technology Act 2000. The digital signature of this authorized user will be binding on the firm.

- 2.7. In case of any change in the authorization, it shall be the responsibility of management/ partners of the firm to inform the certifying authority about the change and to obtain the digital signatures -7- of the new person / user on behalf of the firm / company. The procedure for application of a digital certificate however will remain the same for the new user.
- 2.8. The same procedure holds true for the authorized users in a private/Public limited company. In this case, the authorization certificate will have to be signed by the directors of the company.

3. Opening of an Electronic Payment Account:

For purchasing the tender documents online, bidders are required to pay the tender documents fees online using the electronic payments gateway service shall be integrated with the system very soon till then it will be submitted manually. For online payments guidelines, please refer to the Home page of the e-tendering Portal <https://etenders.hry.nic.in>

4. Pre-requisites for online bidding:

In order to operate on the electronic tender management system, a user's machine is required to be set up. A help file on system setup/Pre-requisite can be obtained from National Informatics Center or downloaded from the home page of the website - <https://etenders.hry.nic.in> the link for downloading required java applet & DC setup are also available on the Home page of the e-tendering Portal.

5. Online Viewing of Detailed Notice Inviting Tenders:

The bidders can view the detailed N.I.T and the time schedule (Key Dates) for all the tenders floated through the single portal e-tendering system on the Home Page at <https://etenders.hry.nic.in>

6. Download of Tender Documents:

The tender documents can be downloaded free of cost from the e-tendering portal <https://etenders.hry.nic.in>

7. Key Dates:

The bidders are strictly advised to follow dates and times as indicated in the online Notice Inviting Tenders. The date and time shall be binding on all bidders. All online activities are time tracked and the system enforces time locks that ensure that no activity or transaction can take place outside the start and end dates and the time of the stage as defined in the online Notice Inviting Tenders.

8. Online Payment of Tender Document Fee, eService fee & EMD fees & Bid Preparation & Submission (PQQ/ Technical & Commercial/Price Bid):

8.1. Online Payment of Tender Document Fee + e-Service fee: The online payment for Tender document fee, eService Fee & EMD can be done using the secure electronic payment gateway. The Payment for Tender Document Fee and eService Fee shall be made by bidders/ Vendors online directly through Debit Cards & Internet Banking Accounts and the Payment for EMD shall be made online directly through RTGS / NEFT & OTC.

The secure electronic payments gateway is an online interface between contractors and Debit card/ online payment authorization networks.

8.2. Preparation & Submission of online Applications/Bids:

- i. Detailed Tender documents may be downloaded from e-tendering website (<https://etenders.hry.nic.in>) from 20.02.2020 to 13.03.2020 (15:00 Hrs.) and tender mandatorily be submitted online following the instruction appearing on the screen.
- ii. **Scan copy of Documents to be submitted/uploaded for Prequalification or Technical bid under online PQQ/ Technical Envelope:** The require documents (refer to DNIT) shall be prepared and scanned in different file formats (in PDF /JPEG/MS WORD format such -8- that file size is not exceed more than 10 MB) and uploaded during the on-line submission of PQQ or Technical Envelope.

A. Only Electronic Form (Refer Tender document).

FINANCIAL or Price Bid PROPOSAL shall be submitted mandatorily online under Commercial Envelope and original not to be submitted manually)

NOTE:-

(A) Bidders participating in online tenders shall check the validity of his/her Digital Signature Certificate before participating in the online Tenders at the portal <https://etenders.hry.nic.in>.

(B) For help manual please refer to the 'Home Page' of the e-tendering website at <https://etenders.hry.nic.in>, and click on the available link 'How to...?' to download the file.

In the first instance, the online payment details of tender document fee+e-Service and EMD & PQQ/Technical Envelope shall be opened. Henceforth financial bid quoted against each of the item by the shortlisted bidder/ Agency wherever required shall be opened online in the presence

of such bidders/ agency who either themselves or through their representatives choose to be present.

The bidder can submit online their bids as per the dates mentioned in the schedule/Key Dates above.

Instruction to Contractor on Electronic Tendering (Applicable only for contract(s) amounting to more than Rs.5.00 lacs)

These conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.

Other Information:

1. The intending Contractors shall fill in the item rate in the online BOQ templates of the tender.
2. Duly accepted power of Attorney in original along with its two certified copies in the name of tenderer or authorized representative to act on behalf of the agency.
3. Bidder must strictly abide by the stipulations set forth in detailed notice inviting tenders while tendering for the work.
4. In case any tender does not comply with procedure given in the DNIT, it will be presumed that the contractor is not interested in work and the work shall not be let out to him. Further he may be de-barred without further notice to him for failing to abide by the approved terms of detailed notice inviting tenders for this work.
5. The tenders which are not accompanied by the earnest money or do not strictly follow the technical requirement, are liable to be rejected summarily without arising any reason and no claim what so ever on their account will be considered.
6. Tenders quotations which are dependent upon the quotations of another tender shall be summarily rejected.
7. Steel reinforcement bars are to be arranged by the contractor of approved quality.

DGM (Project),
HRIDC,
Chandigarh.
Phone: 0172-2715644
Email: hride2017@gmail.com

SECTION II: FORM OF BID

Form of Bid

To,

Managing Director,

Haryana Rail Infrastructure Development Corporation Limited,
SCO 17-19, 3rd Floor, Sec-17A,
Chandigarh
E-mail: hridc2017@gmail.com

Dear Sir,

I/We, _____ (*Name and address of the tenderer*) have read the various terms and conditions of the **Tender documents** attached here with duly signed by me/us and agree to abide by the same. I/We also agree to keep this bid open for acceptance for a period of 90 days from the date fixed for opening the same and on default thereof our Earnest Money (Bid Security) is liable to be forfeited.

I/We hereby declare that we have visited the site of the work and have made ourselves fully conversant of the conditions therein and including the topography of area, soil strata at site of work, sources and availability of construction materials, rates of construction materials, water, electricity, all local taxes, royalties, octroi etc., availability of local labour (both skilled and unskilled), relevant labour rates and labour laws, the existing road and approaches to the site of work, requirements for further service roads/approaches to be constructed by me / us, the availability and rates of private land etc. that may be required by me / us for various purposes, climatic conditions, law and order situation and availability of working days.

I/We have quoted our rates for various items in the Bill of Quantities taking into account all the above factors and We offer to do the work “ _____ ” (*Name of the work*) at the rates quoted in the attached Bill of Quantities and hereby bind ourselves to complete the work in all respects within time schedule depicted in bid documents from the date of issue of letter of acceptance of bid.

A sum of ₹. _____ (Rupees _____) (*amount of Earnest Money Deposit*) has been deposited as Bid Security. I/We understand that the full value of the Bid Security shall stand forfeited without prejudice to any other rights and remedies available to HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED in case our bid is accepted and if:-

- i) I/We do not execute the Contract Agreement within time period specified in the bid documents.
- ii) I/We do not commence the work as soon as is reasonably possible after the receipt of the Letter of Acceptance or elsewhere stated in the Contract documents.

I/We also understand that until a formal Contract Agreement is executed, Letter of Acceptance along with all bid documents shall constitute a binding contract between me/us and Haryana Rail Infrastructure Development Corporation Limited.

Our bank account no. for the purpose of refund of EMD is (Account no./ name of the A/c holder, other details of NEFT/RTGS).

Thanking you,

Yours Faithfully,

Signature _____ in capacity of _____ duly authorized to sign bids for and on behalf of:

_____ *(In Block capital letters)*

Date this _____ day of _____ 2020.

SECTION III: INSTRUCTIONS TO BIDDER

Instructions to Bidders

A. General

1) GENERAL

i. Name of the Work: As indicated in 'Appendix to Tender'.

ii. "A bidder in the capacity of Individual or Sole Proprietor, Partnership Firm or Company can participate in the tender and forward attested copies of the constitution of its firm such as Partnership Deed, Memorandum & Articles of Association, etc. along with original Power of Attorney of authorised signatory".

iii. The work is proposed to be executed under the following relationship:

- a) **Client/Employer:** HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED address as given in 'Appendix to Tender'.
- b) **Consultant:** The successful Bidder to whom the work is awarded shall become the Consultant for the execution of this work.
- c) **Engineer or Engineer -in- Charge:** Means the Project Head of HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (Employer) or any other officer authorized by the Employer to act on his behalf and for the purpose of operating the contract.
- d) **Engineer's Representative:** Means any official nominated from time to time by the Engineer to act on his behalf.
- e) **Contract:** Means a signed Agreement between the successful bidder and the Client.

iv. Joint Ventures (JVs) are not allowed to participate.

v. Throughout these bidding documents, the terms "bid" and "tender" and their derivatives ("bidder"/ "Bidder"), "bid/tendered", "bidding"/ "tendering", etc.) are synonymous. Day means calendar day. Singular also means plural.

vi. Scope of Work:

- a) The scope of work/contract described in "Terms of Reference of Section-VI" in detail. Any other incidental / ancillary Works required in connection with completion of the above as directed by HRIDC/Engineer.
- b) Approximate Estimated cost of the work is as indicated in the 'Appendix to Tender.'
- c) A bidder shall submit only one bid in the capacity of an Individual or Sole Proprietor, Partnership firm or a Company. Violation of this condition is liable to

disqualify the tenders in which such bidder has participated and EMD of all such Bidders shall stand forfeited.

2) Cost of bidding

The bidder shall bear all costs associated with the preparation and submission of the bid and the Employer will in no case be responsible or liable for these costs regardless of the conduct or the outcome of the bidding process.

B. The Bidding Documents

Any Bid not conforming to the prescribed format is liable to be declared non-responsive.

3) Content of bidding document

- i. The bidding documents include the following:
 - a) Notice Inviting Tender
 - b) Form of Bid
 - c) Instructions to Bidders
 - d) Appendix to Bid
 - e) Special Conditions of Contract
 - f) Terms of reference (TOR)
 - g) Certificate of Familiarization
 - h) Schedule of Quantities/ Bill of Quantities
 - i) General Conditions of Contract (GCC)
- ii. The bidder is expected to examine all instructions, terms, conditions, forms, specifications and other information in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the bidders' risk and may result in rejection of his bid.

4) Understanding and Amendment of Tender Documents

- i. The bidder must obtain for itself on its own responsibility and its own cost all the information including risks, contingencies & other circumstances in execution of the work. It shall also carefully read and understand all its obligations & liabilities given in tender documents.
- ii. The bidder is advised to visit and examine the site where the work is to be executed and its surroundings or other areas as deemed fit by the bidder and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and execution of the contract. The cost of visiting the site and collecting relevant data shall be at the bidder's own expenses. It is a condition of the tender that the Bidder is deemed to have visited the site and satisfied him-self with all the conditions prevailing including any difficulties for executing the work.

- iii. At any time prior to the deadline for submission of bids, Employer may for any reason whether at its own initiative or in response to any request by any prospective bidder amend the bidding documents by issuing Corrigendum, which shall be part of the Tender documents. The amendment shall be advised to all the prospective bidders.
- iv. Employer may at its discretion extend the deadline for submission of the bids at any time before the time of submission of the bids.

C. Preparation of Bid

5) Language of Bid

- i. The bid prepared by the bidder and all documents related to the bid shall be written in English.

6) Signing of All Bid papers and Completing Bill of Quantities

- i. All the pages of the tender documents, drawings and Bill of Quantities uploaded by tenderer shall be deemed to have been signed by the tenderer.
- ii. The tenderer must fill and submit the prices as per instructions given in Bill of Quantities. The requisite details should be filled in by the tenderer wherever required in the documents. Incomplete tender or tender not submitted as per instructions is liable to be rejected. Check list for the documents required to be submitted online given in Annexure- II must be uploaded not later than the prescribed date and time for bid submission.

7) Deviations

- i. The bidder should clearly read and understand all the terms and condition, specifications, drawings, etc. mentioned in the original tender documents.
Any deviation submitted by the Bidder shall not be accepted.

8) Earnest Money

- i. The bidder must furnish the Earnest Money as indicated in 'Appendix to Tender' for the work as specified failing which the tender shall be summarily rejected. The Earnest Money has to be deposited online as mentioned in DNIT.
- ii. Forfeiture of Earnest Money:
 - a) The Earnest Money of the Bidder shall be forfeited if he withdraws his tender during the period of tender validity specified in the "Appendix to Tender"

- b)** The Earnest Money of the successful Bidder is liable to be forfeited if he fails to;sign the Contract Agreement in accordance with the terms of the tender, or
 - I.** furnish Performance Guarantee in accordance with the terms of the tender, or
 - II.** In Case of forfeiture of EMD, the Bidder shall be debarred from bidding in case of re-invitation of the tenders.
- i.** Return of Earnest Money
 - a)** The Earnest Money of the unsuccessful Bidders in the form of FDR shall be discharged and returned as promptly as possible and the Earnest Money in the form of DD/ Pay order/ NEFT or RTGS shall be directly credited to his bank account through Electronic Fund Transfer, under advice to the bidder.
 - b)** The Earnest Money Deposit of the successful Bidder shall be retained towards retention money and further deduction of retention money from the bills shall commence after adjusting this EMD amount.
- ii.** Period of validity of tender
 - a)** The Tender shall remain valid for the period indicated in “Appendix to Tender” after the date of the opening of the tender. If the Bidder gives validity period less than that fixed/prescribed by Employer, the tender shall be liable to be rejected.
 - b)** Notwithstanding the above clause, Employer may solicit the Bidders’ consent to an extension of the validity period of the tender. The request and the response shall be made in writing.

D. Submission of Bids

- 9)** Deadline for submission of Tender
 - i.** The tender duly filled must be uploaded online not later than the date and time mentioned in the “Notice Inviting Tender”.
 - ii.** Submission of a tender by a tenderer implies that he had read all the tender documents including amendments if any, visited the site and has made himself aware of the scope and specifications of the work to be done, local conditions and other factors having any bearing on the execution of the work.
 - iii.** Submission of tenders
 - a)** All documents/ forms/ instructions/ specifications etc. listed in this Instruction to Tenderers and those attached as per the Annexure II are deemed to be a part of the bid/ tender and accepted by the bidder.
 - b)** In case of any ambiguity, HRIDC will be free to seek confirmation of information from the issuer of the document.

E. Bid Opening and Evaluation

- 10) Opening of Tender**
 - i.** Tenders will be opened at the address mentioned in “Notice Inviting Tender” in presence of Bidders or authorized representatives of Bidders who wish to attend the opening of tenders. Physical presence during bid opening is optional.
 - ii.** Bidders or their authorized representatives who are present shall sign register in evidence of their attendance.
 - iii.** Bidder’s name, presence or absence of requisite Earnest Money, total cost of work quoted or any other details as Employer may consider appropriate will be displayed with list to all participating bidders after bid opening.

- 11) Clarification of the Tenders**
 - i.** To assist the examination, evaluation and comparison of the tenders, Employer may at his discretion ask the Bidders for any clarifications as considered essential. All such correspondence shall be in writing and no change in price or substance of the tender shall be sought or permitted. The above clarification for submission of the details shall form part of the tender and shall be binding on Bidder.

- 12) Preliminary examination of bids**
 - i.** The Employer shall examine the bids to determine whether they are complete, whether copy of all the relevant documents have been uploaded and generally they are in order.
 - ii.** Prior to the detailed evaluation, Employer shall determine whether each bid is of acceptable quality, is generally complete and is substantially responsive to the bidding documents. For purposes of this determination, a substantially responsive bid is one that conforms to all the terms, conditions and specifications of the bidding documents without material deviations, objections, conditionality or reservation. A material deviation, objections, conditionality or reservation is one;
 - a)** That affects in any substantial way the scope, quality or performance of the contract.
 - b)** That limits in any substantial way, inconsistent with the bidding documents, the Employers’ rights or the successful Bidder’s obligations under the contracts; or
 - c)** Whose rectification would unfairly affect the competitive position of other Bidders who are presenting substantially responsive bids.
 - iii.** If a bid not substantially responsive, it shall be rejected by the Employer.
 - iv.** In case of tenders containing any conditions or deviations or reservations about contents of tender document, Employer may ask for withdrawal of such conditions/deviations/reservations. If the Bidder does not withdraw such conditions/deviations/ reservations, the tender shall be treated as non-responsive. Employer’s decision regarding responsiveness or non-responsiveness of a tender shall be final and binding.

- 13) Evaluation and Comparison of tenders:**

tender being annulled then such bidder shall be treated as ineligible for participation in re-tendering of this particular work and also for any other work for a period of 6 months. A repeat incident of similar type within a period of 2 (two) years will render the bidder ineligible for participation in all future tenders for a further period of 2 (two) years.

19) Declaration of non – performance or ban status

Bidders are not eligible to participate in the tender process under the following conditions:

- i.** They have been declared a non-performer by Central Government/ State Government or a CPSU during the preceding 2 years.
- ii.** They are currently debarred from contract work by Central or State Government or a CPSU.

Accordingly, Bidders are required to sign an Affidavit as per the enclosed pro-forma in Annexure-I, declaring their status of non-performance or debarment.

20) Details of disputed status of ban/non-performance

Bidders will clearly state the status of dispute in the cases of ban/ non-performance pending in courts against them as on the date of opening of tender. Merely, pending appeal with the Departments concerned and Courts will not merit change of status. Grant of stay order by a Competent Court will be taken into account while considering the status of ban/ non-performance.

- i.** Bidder to be fully responsible for the consequences of misrepresentation
 - a)** Any suppression of information and misrepresentation will render the Bidder ineligible for the tender along with the forfeiture of Earnest Money. The Bidder will also be liable for disqualification for future tenders of HRIDC for a period of 2 years.
 - b)** If any suppression of information and misrepresentation is found after the award of Contract, the Contract may be terminated with forfeiture of EMD and SD (if any). The Consultant will also be disqualified for future tenders of HRIDC for a period of 2 years.

(Ref. Clause 19.of Instructions to bidders)

**FORMAT
AFFIDAVIT***

1. I/we, the undersigned, do hereby certify that all the statements made in the enclosed attachments are true and correct.
2. The undersigned also hereby certifies that
 - i. Neither our firm M/s _____ have abandoned any work awarded to us by any Authority / Department of Government of India or Govt. of Haryana or CPSU or any multi-laterally funded project work nor any contract awarded to us for such works have been rescinded, during the last 2 years prior to the date of this bid.

or

The details of contracts awarded to us by the Authorities / Departments of Government of India, Govt. of Haryana, CPSUs and the multi-laterally funded projects which have been abandoned / rescinded during the last 2 years prior to the date of this bid and the reasons there for are enclosed**.

- ii. We have not been declared a non-performer by any Authority / Department of Government of India or Govt. of Haryana or a CPSU or a multi-laterally funded agency during the last 2 years prior to the date of this bid.
- iii. We are not debarred for any contract work by any Authority / Department of Government of India Govt. of Haryana or CPSU or a multi-laterally funded agency.

Or

1. We were debarred for contract work by _____ for a period of _____ and the debarred period is already over. ***
2. We have no objection to HRIDC requesting to any bank, person, firm or body and any such agency furnishing pertinent information as deemed necessary or to verify this statement or regarding our competence and general reputation.
3. We understand that further qualifying information may be requested by HRIDC and we agree to furnish any such information at the request of HRIDC within the prescribed time.
4. We find ourselves with all the stipulations of the Bidding Document including period of completion, provision of adequate equipment, personnel and other resources required for completion within the stipulated completion period and agree to augment any resources, if found necessary for timely completion of the project, as desired by the HRIDC.
5. **We have read and understood all the provisions included in the bid documents and abide by them.**

6. The information furnished by us is correct and we understand the consequences in case any of the information furnished is not found to be true.

(Signed by the Authorized Representative of the Firm)

Name of the Authorized Representative.

Name of the Firm.

Dated:

-
- * To be executed on a non-judicial stamp paper of Rs.100/-.
 - ** If no details are attached, it will be presumed that there is no rescission of any contract in the relevant two years. **A wilful suppression of information may result in termination of Contract and debarring for two years.**
 - *** **Disputes pending with courts may be listed along with their status.**
All reference dates are to be reckoned from the date of opening of tender.

CHECK LIST FOR LIST OF DOCUMENTS duly page numbered, signed, stamped by authorised signatory of the firm with the tender and submit at the address specified in the “Notice Inviting Tender” not later than the prescribed date and time for bid submission:

1. Forwarding letter of the Bidder.
2. Form of Bid.
3. Details of similar works completed in last 3 years (Format-1)
4. Annual Turnover for the last three years with supporting documents (Format - 2)
5. Programme for deployment of key personnel (Format - 3).
6. Attested copies of the constitution of its firm such as Partnership deed (in case of partnership company), Memorandum of Articles of Association, etc..
7. Sales Tax/Works Contract Tax Registration Certificate, Service Tax -Registration Certificate (as applicable).
8. ISO 9001-2008 certificate, if any.
9. Banker’s Solvency Certificate.
10. Schedule of start and completion of work in the form of Bar Chart.
11. Methodology for execution of works.
12. Programme for Quality assurance during execution of work
13. Month wise Cash flow requirements.
14. Proof of transaction towards payment of Earnest Money through NEFT or RTGS and copy of Earnest Money Deposit of requisite amount in the prescribed form.
15. Original Power of Attorney duly attested by Notary Public of the in favour of the person signing the tender documents or photocopy duly attested by Notary Public or a Resolution of Board of Directors authorizing the person to deal with tenders/this tender case.
16. Banker’s Details (Name of the Bank and Branch), along with bidders own bank details (Account no., Name of Account holder, NEFT/RTGS details)
17. Affidavit (as per format given in annexure-I)
18. Any other details sought through ITB.

Criteria for Evaluation of tenders

A. Essential Qualifying Criteria

1. As a proof of technical experience/competence, the tenderer should have successfully completed at least one similar single work for a minimum value of 35% of advertised tender value, in last Three Financial Years (i.e. Current year and Three Previous Years) up to the date of opening of the tender.”
2. As a proof of sufficient financial capacity and organizational resources, contractor should have received the total payments against satisfactory execution of all completed/ongoing works of all types (not confined to only similar works) during the last three financial years and in the current financial year (upto the date of opening of the tender) of a value not less than **150%** of the advertised cost of work.

Note:

- a) The similar nature of work is defined as under:-

Development of alignment of any project(Road/Railway) involving tunnel of length 1.0 Km or above including geological mapping, geophysical survey, Detailed design and cost estimate. Besides above, the tenderer should have past experience of conducting Geo Technical investigation in hilly area for tunnelling work of atleast 1.0 Km or they/he should submit MOU with the firm having experience of Geo technical investigation in hilly area for tunnelling work of atleast 1.0 Km, while submitting their/ his offer.

The above work, if executed as part of any other work, will also be considered eligible.

- b) The financial turnover shall be judged from ITCC or Annual Reports including Profit and Loss Account.
- c) The Contractor should have positive net worth. This will be judged from the audited Balance Sheet of the last financial year ending on a date not prior to 18 months from the due date of submission of the tender.
- d) The contractor should submit performance certificates, in reference to S.No.1 above from clients (Govt. /Semi Govt./Public Sector/ Public listed company) for having successfully completed similar works in the last 3 financial years & the current financial year.
- e) Joint ventures shall not be considered.
- f) Tenderer has to satisfy the eligibility criteria for technical capability and competence as well as for financial capacity and organizational resources.

3. REQUIREMENT OF SKILLED AND TRAINED MANPOWER INCLUDING ENGINEERS AND TECHNICAL STAFF

S. No.	Personnel	Qualification	Minimum number required	Total Experience for each person (in years)	Maximum Marks (Total 100)
1	Team Leader	B.Tech.	1	20 (including 10 years in Indian Railways, its PSUs/ Metro Railways)	20
2	Design Expert (Civil Engineering)	M Tech (Structures)	1	10(including experience of alignment design of any tunnel of length 1 KM or above)	15
3	Alignment Expert	B.Tech in Civil Engineering	1	5(including experience of alignment design of any tunnel of length 1 KM or above)	15
4	Geo Technical Expert	M. Tech in Geo Tech	1	5(in the relevant field)	10
5	Geological Expert	M Sc in Geology	1	5(in the relevant field)	10
6	Electrical Expert	B.Tech	1	5 (in the relevant field)	10
7	Survey Engineer	Diploma	1	5	5
8	Auto CAD Experts	Diploma	1	5	5
9	Site Engineers	Diploma in Civil Engineering	2	5	5x2=10
Total Technical Score (S _T) out of Max. 100 Marks= Sum total of marks obtained against S.No 1 to 9 above					

Note:

- i. Bidders must enclose Name, date of birth and complete testimonials of the experts proposed to be deployed on the project.
- ii. Marks shall be awarded as per the relevance of experience with each of the experts. Discretion of HRIDC in evaluating the experts cannot be challenged.
- iii. Proportionate marks may be awarded in case of experts falling short in relevant experience.
- iv. Persons with the approved CV will have to be mobilized to carry out the work totalling up to the time period mentioned against each position.
- v. Some experts may continue till the execution of works start in the field and relevant records of control of alignment, utility survey, etc. have been handed over to the Contactors. The terms of their engagement can be negotiated in case required.

B. Short-listing of Applicants

- i. The contractors should pass in all items of “Essential Qualifying Criteria”. In case of the bidder not meeting the Essential qualifying criteria, no further evaluation of the bid will be carried out and the bidder will be disqualified.
- ii. The tenderers will have to show the availability of adequate trained manpower as per A3 above (To be filled by Tenderer in Format 1,2 & 3).

- iii. Tenderer(s) may please note that their offers will be evaluated as per the credentials/documents attached by the tenderer(s) along with the Tender. Of the Applicants ranked as aforesaid, not more than five shall be pre-qualified and short-listed for financial evaluation in the second stage. However, if the number of such pre-qualified Applicants is less than two, HRIDC may, in its sole discretion, pre-qualify the Applicant(s) whose Technical Score is less than 75 marks; provided that in such an event, the total number of pre-qualified and short-listed Applicants shall not exceed two.

C. Evaluation of Financial Proposal

- i. Subject to the discretion of HRIDC, the Financial Proposals of those Applicants whose Technical Proposals score less than 75 marks shall be returned un-opened to the Applicants.
- ii. In the second stage, the financial evaluation will be carried out as per **Clause D**. Each Financial Proposal will be as stamped and signed a financial score (S_F).
- iii. For financial evaluation, the total cost indicated in the Financial Proposal (Quoted Price in BOQ) will be taken inclusive of Service Tax etc.
- iv. HRIDC will determine whether the Financial Proposals are complete, unqualified and unconditional. The cost indicated in the Financial Proposal shall be deemed as final and reflecting the total cost of services. Omissions, if any, in costing any item shall not entitle the firm to be compensated and the liability to fulfill its obligations as per the TOR within the total quoted price shall be that of the Consultant. The lowest financial proposal (F_M) will be given a financial score (S_F) of 100 marks. The financial scores of other proposals will be computed as follows:

$$S_F = 100 \times F_M/F \text{ where}$$

$$F = \text{amount of Financial Proposal}$$

D. Combined and Final Evaluation

- i. The composite score of a bidder which shall be the deciding factor in award of the work shall be worked out as under:

$$\text{Composite Score of a bidder} = (S_t \times 0.70) + (S_f \times 0.30)$$

Where, S_t & S_f are the technical and financial scores of a bidder respectively.

- ii. Bidder with the highest composite score shall be considered for the award of work. In case, bidders have same composite score then the bidder who has highest technical score (S_t) shall be considered for award of work. Further, in case technical score are also same then the bidder who has executed more eligible assignments shall be considered for the award of work.

FORMAT-1

(Ref. Sr. No. 3 of Annexure-II to Instruction to bidders)

DETAILS OF SIMILAR WORKS COMPLETED IN LAST THREE YEARS

S. No.	Description of the Work	Name and address of the Employer	Contract No. and date	Date of award of work	Stipulated date of completion	Date of actual completion	Value of completed work (In Lacs of Rs.)	Reasons for delays, if any	Penalty, if any, imposed for delay	Any Remarks other relevant information
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1

2

3

4

5

6

Note:

1. Please attach copies of the certificates issued by the Client.
2. Only those works shall be considered for evaluation for which copies of the certificates issued by the client are attached.

FORMAT-2

(Ref. Sr. No. 4 of Annexure-II to Instruction to bidders)

ANNUAL TURNOVERS FOR THE LAST THREE YEARS

S.No.	Year	Turnover from Civil Engineering works (In lacs of Rs.)	Turnover from all sources (In lacs of Rs.)	Remarks
1				
2				
3				

Note:

- Please attach certified/attested copies of the latest ITCC and/or Profit and Loss Account statement to support the information furnished.
- Certified copy of Chartered Accountant showing turn-over of Last three financial years and in the current financial year (upto date of opening of tender).

FORMAT-3

(Ref. Sr. No. 5 of Annexure-II to Instruction to bidders)

PROGRAMME FOR DEPLOYMENT OF MAN POWER ALONGWITH BIO-DATA OF KEY PERSONNELS.

S.No.	Name	Qualification	Designation	Total Experience (in years)	Programme for deployment
1					
2					
3					

SECTION IV: APPENDIX TO BID

Appendix to Bid

Description	Reference Clause
“Detailed Design, Geological Mapping, Geo Technical Investigations, and other ancillary works in connection with construction of Tunnel and its approaches in Sohna-Manesar Section of ‘Haryana Orbital Rail Corridor’ Project in the state of Haryana.”	1.i of Instructions to Bidders
Client:- Haryana Rail Infrastructure Development Corporation Limited, SCO 17-19, 3 rd Floor, Sector-17, Chandigarh	1.iii(a) of Instructions to Bidders
Scope of Work:- Scope of work consists of as per Terms of Reference (TOR/Technical Specifications)	1.vi of Instructions to Bidders
Approximate Estimated Cost of the Work:- Rs. 1.09Cr	1.vi (b)of Instructions to Bidders
Amount of Earnest Money Rs. 2,04,500/-	8.i of Instructions to Bidders
Period of Validity of Bid:- 90 days.	9.i of Instructions to Bidders
Period of Completion:- 120 days	8.0 of Special Conditions of Contract
Defect Liability Period:- Nil	9.0 of Special Conditions of Contract

SECTION V: SPECIAL CONDITIONS OF CONTRACT

Special Conditions of Contract

1. ORDER OF PRIORITY OF CONTRACT DOCUMENTS:

Where there is any conflict between the various documents in the contract, the following order of priority shall be followed i.e. a document appearing earlier shall override the document appearing subsequently:

- 1.1. Agreement
- 1.2. Letter of Acceptance
- 1.3. Notice Inviting Bid
- 1.4. Instructions to the Bidders
- 1.5. Appendix to Bid
- 1.6. Form of Bid
- 1.7. Special Conditions of the Contract
- 1.8. General Conditions of Contract
- 1.9. Terms of Reference (TOR)/ Technical Specifications
- 1.10. Relevant codes and Standards
- 1.11. Bill of Quantities (BOQ)

2. MOBILISATION ADVANCE:

No mobilization advance shall be paid to Consultant.

3. SUPPLY OF MATERIALS

Consultant shall make his own arrangements at his cost for all materials required for execution, completion and maintenance of all items of work included in his scope of work to the complete satisfaction of the Engineer. Engineer shall not supply any materials nor shall assist for procurement of any materials required for execution, completion and maintenance of works.

4. SUPPLY OF PLANT AND MACHINERY BY EMPLOYER/ENGINEER

Consultant shall make his own arrangements at his cost for all Plant and Machinery required for execution, completion and maintenance of all items of work included in his scope of work to the complete satisfaction of the Engineer. Engineer shall neither supply any Plant and Machinery nor assist for procurement of any Plant and Machinery required for execution, completion and maintenance of works.

5. LABORATORY AND TESING FACILITIES OF SAMPLES

The laboratory tests on samples shall be done through national reputed agency approved by HRIDC.

The Consultant shall have to arrange for all field / lab tests at his own cost for carrying out all the tests required, as per Specifications or as stated elsewhere in the contract, including supply of laboratory equipment and also provision of adequate number of

qualified personnel, erection, maintenance and running of laboratory including all consumable like chemicals and reagents.

6. SALES TAX ON WORKS CONTRACT /GST as applicable

- i.** The Consultant shall get registered with the concerned Sales Tax Department of the relevant state(s) of the project and submit a copy of the same to the Employer/Engineer. He shall be responsible for filing sales tax returns and assessments, as necessary as per prevalent Laws, Rules and Regulations and shall also furnish necessary certificates to Employer/Engineer from time to time.
- ii.** Employer/Engineer intends to register with the Sales Tax Department under the **Composition Scheme** and shall be responsible for depositing of Sales Tax on works contract leviable on this project. The Consultants need not consider Sales Tax liability on works Contract while quoting their rates. The Consultant may arrange necessary TDS exemption certificate from Sales tax/Commercial tax/Trade tax authorities for exemption from deduction of tax at source. Till the TDS exemption certificate is submitted by the Consultant, the Engineer will continue to deduct the Sales tax at source from the payments due to the Consultant and deposit the same with Sales Tax Department. If requested, the Employer/Engineer shall issue necessary certificate in this regard.
- iii.** Wherever certain exemptions/benefits are available on custom duty, excise duty, service tax, Sales tax, works contract tax etc., the Consultant shall consider the same while quoting his rates. For instance, materials/ Plant and Machinery etc. used for execution of the projects financed by International organizations enjoy exemption from custom duty and/or excise duty on fulfilling the conditions as per Govt. notifications. Similarly the Consultant shall ensure that whenever any benefits are available under Sales tax/Works contract tax, Service tax, these shall be considered while quoting the rates.

7. PRICE ADJUSTMENT

No price adjustment shall be applicable in this tender during the work period till completion of the works.

8. COMPLETION PERIOD

The work is required to be completed within a period as specified in the Appendix to Bid from the date of issue of letter of acceptance. The work shall be completed in phased manner if specified in the Appendix to Bid.

The work has to be executed in co-ordination with other agencies working on or near the project.

In case of any delay in the completion period, the extension of the same shall be dealt as per the clause 49.0 of General Conditions of the contract.

9. DEFECT LIABILITY PERIOD

Defect Liability Period has been specified in the Appendix to Bid.

10. INSURANCE

Clause 9.0 of GCC may be referred.

11. PERFORMANCE SECURITY:

Relevant clauses (clause 8.0) of General Conditions of Contract are applicable regarding performance guarantee.

12. RETENTION MONEY:

Relevant clauses (clause 8.0) of General Conditions of Contract are applicable regarding retention money.

13. COMPLETION PERIOD, WORK PROGRAMME SUBMISSION AND COMMENCEMENT OF WORK AND DELAY & EXTENSION OF CONTRACT

- a. The work is required to be completed within the period as mentioned in appendix to bid from the date of issue of letter of acceptance.
- b. Within 7(Seven) days of the issue of Letter of Award and before the work is commenced; the Consultant shall have to submit a detailed programme for each major element of the work, using the modern networking techniques for Project monitoring, for approval of the Engineer. The construction programme will show the general methods, arrangements, order and timing for all the significant activities in the works identifying the critical path for the work clearly.
- c. The agreement or the approval of the programme by the Engineer shall not relieve the Consultant of any of his responsibilities to complete the whole works by the prescribed time.
- d. The Consultant shall submit to the Engineer, for approval, an updated Program, whenever the Engineer may so direct, to take account of the actual progress of the Contract Works so as to achieve completion either before the due date for completion or by the due date for completion or as soon as practicable thereafter. The Engineer may further require the Consultant to indicate the means by which the programmed progress will be achieved. If the Consultant does not submit an updated Programme within a reasonable period as indicated by the Engineer, the Engineer may withhold the payment of next on account bill until the overdue Programme has been submitted.
- e. In case of any delay in the completion period, the extension of the same shall be dealt as per clause 49 of General conditions of contract (GCC).

14. ACHIEVEMENT OF MILESTONE PROGRESS

In order to ensure progress during execution of the work, the Consultant will be expected to achieve the following milestone targets ahead of dates mentioned against each. Failure to accomplish milestone targets within allocated time frame, save for reasons accepted as

valid by the Engineer-in-charge, shall create and constitute ground for failure on the part of Consultant for maintaining progress of the work as per agreed programme sufficient enough to recover liquidated damage @ Rs 10,000/- per day after the due date of each mile stone, limited to amount as per GCC.

Milestone targets	Description of mile stone to achieve	Time frame to achieve Milestone
Milestone 1	Submission of proposed alternate alignments on the basis of DTM, Approval of alignment, Geophysical Survey & Geological Mapping	D+ 45 days
Milestone 2	Completion of physical and laboratory work in connection with Geo Technical Investigations.	D+ 75 days
Milestone 3	Geo Technical Investigation Report duly proof checked.	D+ 85 days
Milestone 4	Submission of Draft Design Report of all components of tunnel including drawings.	D+ 95 days
Milestone 5	Scrutiny and approval of Draft Detailed Design Report by HRIDC.	D+100 days
Milestone 6	Completion of Final Location Survey	D+ 100 days
Milestone 7	Submission of final design and drawings duly proof checked by NIT/IIT	D+ 120 days

Note:

- 1) **‘D’ is the date of issue of Letter of Award by HRIDC to the Consultant.**
- 2) **The liquidity damages recovered under clause 14 of SCC and clause 49.6 of GCC together would be limited to 10% of the contract value of the work.**

15. CONTRACT AGREEMENT

The Consultant shall enter into and execute the Contract agreement in the form of agreement (**Annexure-V**) within **28 days** from the date of issue of Letter of Acceptance. The stamp papers of the requisite value as per the prevailing laws shall be provided by the Consultant at his own cost. Original agreement shall be retained by the Employer/Engineer and a certified copy shall be made available to the Consultant.

16. IMPLEMENTATION OF QUALITY, SAFETY, HEALTH AND ENVIRONMENT MANAGEMENT SYSTEM (REF. CLAUSE 44 OF GCC)

In reference to clause 44 of GCC, specification of Safety, health and Environment specification has been attached, which shall be followed by the contract, during execution of work.

17. POWERPOINT PRESENTATION BY CONSULTANT

The consultant shall make power point presentation of the project as and when required/instructed before HRIDC, GoH and Railways to facilitate approval/ decision thereof.

ADDITIONAL SPECIAL CONDITIONS

18. PROPOSED GROUND INVESTIGATION

18.1. General

Ground Investigation is proposed to be carried out at each Portal & along the tunnel alignment. In-situ and laboratory tests in soil strata, rock and ground water as tabulated in **Table 1** and **Table 2** shall be carried out as per relevant Indian Standard codes related to Geotechnical Investigations.

Table 1: Summary of Proposed In-situ testing

GI Type	Item	Number of Tests
Field tests in Soil	SPT	At every 1.5m interval for all Boreholes in soil and highly weathered rock CR<20%
Field tests in Rock	Core Box Photographs	For all Boreholes, at all depths when rock is met
	Core Recovery & RQD (%)	At all places where core is recovered in rock

Table 2: Summary of Proposed Laboratory testing

GI Type	Item	Approximate Sampling Location	No. of Tests
Laboratory Testing on Soil	Atterberg Limits	Disturbed samples for the tests shall be collected at all depths where SPT is carried out	At all places where disturbed samples are collected
	Sieve analysis and Hydrometer analysis		
	Specific Gravity		
	Natural Moisture Content	Undisturbed samples shall be collected at every 3 m depth below filled up layer for all Boreholes	Tests shall be done on all UDS sample collected for all Boreholes
	Dry & Bulk Density		
	Triaxial Testing (Unconsolidated Undrained)		
	Direct Shear Box Testing		
	Consolidation Test		
Laboratory Testing on Rock	Dry Density (kN/m ³)	Cores should be collected for all boreholes where rock is met	One test per core in all boreholes where rock is met
	Specific gravity		
	Water absorption & Porosity (%)		
	Natural moisture content		
	Uniaxial Compressive Strength		
	Point load strength index test		
	Tensile strength		

GI Type	Item	Approximate Sampling Location	No. of Tests
	Poisson's ratio		
	Modulus of elasticity		
	CERCHAR Abrasivity Index		
	Triaxial testing		
	Petrography of the rock samples		
Chemical Testing on soil & Water	pH Chemicals such as Chloride (ppm), Sulphate (ppm), Carbonate, Nitrate, Calcium, Magnesium etc.	Samples shall be collected within 30 m depth from NGL	One Test per Borehole

19. FIELD INVESTIGATION

19.1. General Requirements

The following are the general requirements to be met while carrying out boring for field investigation.

- I. The reduced levels (RLs) at Borehole locations should also be determined with respect to the single bench Mark (BM). Any deviation in Location or depth of borehole should be specified indicating the reason for the deviation in the location.
- II. The minimum diameter of the borehole should be 150 mm and boring should be carried out in accordance with the provisions of IS: 1892 and as per this specification.
- III. Casing pipe should be used in the boreholes to support its sides when a caving is suspected to occur inside the borehole. When casing pipe is used, it should be ensured that its bottom is always above the bottom level of the bore hole by a minimum of 15 cm. In case of cohesion less soils the advancement of the casing pipe should be such that it does not disturb the soil to be tested or sampled. The casing should be advanced by slowly turning the casing pipe and not by driving.
- IV. In-situ tests should be conducted, and undisturbed samples should be obtained at specified intervals in the boreholes. Representative samples should be preserved for conducting various tests in the laboratory. Water table in the borehole should be carefully recorded and reported. No water/drilling mud should be added while boring above ground water table. For cohesion less soil below water table, the water level in the borehole should always be maintained sufficiently above the water table.
- V. The borehole should be cleaned using suitable tools up to the depth of testing or sampling, ensuring that there is minimum disturbance of the soil at the bottom of the borehole. The process of jetting through an open tube sampler shall not be permitted.
- VI. In cohesive soils, the borehole may be cleaned using a bailer with flap valve. Gentle circulation of drilling fluid should be done when rotary mud circulation boring is adopted.
- VII. On completion of the boreholes, the Contractor should backfill all the bore. It should be back-filled using selected earth in order that the ground is restored to its original condition.

19.1.1. Borehole Termination Criterion

Borehole exploration shall be terminated at any of the depths below, whichever occurs earlier.

- I. Minimum depth of exploration should be 50 m.
- II. Maximum depth of exploration should be 100m or till a competent stratum is reached.
 - a. In the case of soils, exploration has to be carried out till the depth of a competent strata where SPT refusal i.e. $N > 100$ or penetration is less than 25mm for 50 blows whichever is earlier is reached.
 - b. If a rock stratum is encountered the exploration shall be terminated 10 m into this stratum, provided the stratum is found to be hard rock. The rock stratum is said to be hard rock if it has a CR $> 70\%$ and RQD $> 50\%$. The competency of the rock stratum at the termination depth should be confirmed using this criterion. It is important to ensure that boulders or layers of cemented soils are not mistaken for hard rock. This necessitates core drilling to a depth of at least **3m** into the hard rock in areas where boulders are known to occur.
 - c. Where ever competent rock is not met, the borehole should be terminated at least 15 m (RQD $< 50\%$ & $> 10\%$) and 30m (RQD $< 10\%$) into the weathered stratum.

19.1.2. Rotary Mud Circulation Boring

This method can be used in all types of soil below water table. In this method boring should be done by rotating the bit fixed at the bottom of the drill rod. Proper care should be taken to keep firm contact between the bit and the bottom of the borehole. Bentonite or mud laden fluids should be used as the drilling fluid to serve as the protective surface inside the borehole.

19.1.3. Rock Boring

If rock is encountered, Rotary type drilling machines should be used for boring. A wash bore method of drilling should be used to advance the borehole creating a 100 mm diameter hole through the superficial deposits to the top of the rock head. The borehole will then be advanced through the rock generally using H size (76 mm core diameter). The drilling system shall comprise of the use of minimum H-size double tube core-barrels with surface set diamond core bit and water flush. Single core barrels will not be permitted. Details of rock drilling data (Core recovery (CR), Rock Quality Designation (RQD), water loss etc.,) along with the sampling details should be listed in the respective bore logs.

19.2. In-Situ Testing

At all elevations, necessary in-situ tests appropriate to the soil nature should be performed in order to ascertain the in-situ Engineering behaviour of soil strata. Those tests should include but not limited to the list given in **Table 1**.

19.2.1. Standard Penetration Test

This test should be conducted in all types of soil deposits met within a bore hole to find the variation in the soil stratification by correlating with the number of blows required for unit penetration of a standard penetrometer. This test should be conducted at 1.5 m intervals and every change of strata starting from 1.0 m below ground level. The specifications for the equipment and other accessories, procedure for conducting the test and collection of representative soil samples should conform to IS: 2131.

The test shall be carried out by driving a standard split spoon sampler in the bore hole by means of a 650N hammer having a free fall of 0.75 m. The sampler shall be driven to 450 mm recording the number of blows for every 150 mm. The number of blows required for each 150 mm penetration should be recorded and furnished in the report. The number of blows for last 300 mm drive shall be reported as N Value. The test shall be discontinued when the blow count is equal to 100 or penetration is less than 25 mm for 50 blows whichever is earlier. At location where test is discontinued the penetration and number of blows shall be reported. Sufficient quantity of representative soil samples should be collected from the split spoon sampler (attached to the SPT) for identification and laboratory testing. The sample should be visually classified and recorded at the site and should be properly preserved without loss of moisture content and labelled for future identification.

Within the alluvial deposits alternate SPT and open driven undisturbed samples should be carried out where possible, reducing to only SPTs where soil is too stiff to obtain undisturbed samples without causing excessive disturbance. Within decomposed rock, if encountered, SPT testing will be conducted when successive rotary runs proved abortive due to poor recovery.

19.3. Sampling

Sufficient number of undisturbed and representative soil samples should be collected depending upon the type of soil for reliable estimation of engineering properties of soil. Representative soil samples should be collected for field identification and for conducting the tests such as sieve analysis, index properties, specific gravity, chemical analysis, etc. Undisturbed samples should be collected to estimate the physical strength and settlement properties of the soil. All the accessories required for sampling and the method of sampling should confirm to IS: 2132. All samples collected in the field should be classified at the site as per IS: 1498.

All the samples should be identified with date, borehole number, depth of sampling etc. It is also essential to mark an arrow pointing towards the top surface of the sample as the soil was in-situ. Care should be taken to keep the core samples and box samples vertically with the arrow directing upwards. The tube samples should be properly trimmed at both ends and suitably capped and sealed with molten paraffin wax.

When the collection of undisturbed soil sample at a specified depth is not possible, the reason for the same should be indicated in the bore log. In such a case, undisturbed sampling may be replaced by any suitable field test such as SPT test to determine the in-situ Engineering properties of the strata.

Precaution should be taken to ensure that the samples are not disturbed and no change in moisture content takes place during handling, transportation and storing. They should be placed in a temporary store at the end of the day's work. Packing and transporting all the samples from site to the laboratory should be as per IS 4078 within seven days after sampling with proper protection against loss and damage.

19.3.1. Representative Samples

Representative soil samples should be collected in bore holes at regular intervals to provide a complete description of soil profile and its variation. Samples should be collected in boreholes at every identifiable change of strata to supplement the boring records. Samples should be immediately stored in air tight jars/polythene bags and should fill the jar/bag as far as possible. The same should be sealed properly to avoid any change in moisture content.

In elevated areas, if superficial material is available in plenty, then bulk samples from a depth of about 0.5 m below ground level should be collected to establish all the required properties to use it as a fill material. Representative samples weighing about 25 Kg should be collected at shallow depths and immediately stored in polythene bags as per IS: 1892. The bags should be sealed properly to avoid any change in moisture content and they should be kept in wooden boxes.

19.3.2. Undisturbed Sample

In each borehole undisturbed sample should be collected at regular intervals of 3 m or every change of strata. Samples should be of minimum 100 mm diameter and 450 mm length. Samples should be collected in such a manner that the structure of the soil and its moisture content do not get altered. The specifications for the accessories required for sampling and the sampling procedure should conform to IS: 1892 and IS: 2132. Undisturbed sampling in sand should be done using compressed air technique mentioned in IS: 8763. Thin walled sampler should be used to collect undisturbed samples by pushing the tube into the soil. The sampling tube should have a smooth finish on both surfaces and minimum effective length of 450 mm. The area ratio of sampling tubes should be less than 10%. However, in case of stiff soils, area ratio up to 20% should be permitted.

A general guideline is given in the **Table 3** to choose the type of sampler depending upon the nature of the soil.

Table 3: Types of samplers

Soil Type	Preferred Sampler
Gravel	Large Diameter thick-walled open drive sampler with catcher device.
Sand	Thin-wall drive sampler with free or stationary (fixed) piston.
Rock	Double tube/ Triple tube core barrel with air, mud or foam flush.

19.3.3. Rock samples

Rock samples should be collected during core drilling in rock strata to get continuous recovery of core. Minimum of double tube core barrels fitted with drill bits shall be used for coring of NX size samples through rock formations. Water may be circulated down the hollow rods to carry the rock cuttings to the surface as sludge. These should be retained as samples in traversing friable rock where cores cannot be recovered. The rock cores should be placed in wooden core boxes in a proper sequence, number each core following depth measured below existing ground levels. The core boxes shall be 1.5 m in length divided longitudinally by light battens to hold 5 rows of cores. Photographs of rock core boxes are to be taken immediately after drilling and submitted along with the field logs. Also, the rock has to be classified in the field by an experienced geologist. For unconfined compressive strength determination, a core with diameter to height ratio of 1:1 is required. Rock pieces may be used for determination of specific gravity and classification.

19.4. Ground Water

One of the following methods should be adopted for determining the ground water table in bore holes as per IS: 6935.

In permeable soils, the water level in the bore hole should be allowed to stabilise after

depressing it adequately by bailing. When the water level inside the bore hole is found to be stable, the depth of water level below ground level should be measured. Stability of sides and bottom of the bore hole should be ensured at all time.

For both permeable and impermeable soils, the following method is suitable. The bore hole should be filled with water and then bailed out to various depths. Observations on the rise or fall of water level should be made at each depth. The level at which the water level stabilises should be considered as the water table elevation. This should be established by three successive readings of water level taken at an interval of two hours.

In case any variation in ground water level is observed in any special boreholes, then the water level in these boreholes should be recorded during the course of the field investigation. Precautions should be taken so that water (rain, etc.) does not enter the bore hole if the hole is left open for 24 hours for water level reading.

19.4.1. Subsoil Water Samples

Sub-soil water samples should be collected for carrying out chemical analysis. Representative samples of ground water should be collected when it is first encountered in bore holes before the addition of water to aid boring or drilling. Water samples should not be collected when bentonite slurry or mud has been used for drilling operation. If water has been added for drilling purposes or if ground water has been diluted by surface rain water, then the bore hole should be dewatered and water allowed to rise from which the sample may be taken.

The sampling apparatus should be such that the water at the desired depth can be collected directly without any disturbance and any change in the concentration of the constituents like dissolved gases, etc. Undue agitation should be avoided. An ordinary suction pump with the suction end inserted up to the required depth in the borehole should be used for this purpose.

The sample should be collected in a clean vessel and allowed to settle so that the supernatant liquid can be poured into a clean well-rinsed glass or polythene bottle. Sufficient quantity and number of samples should be collected to carry out the chemical analysis and sent to a laboratory in airtight bottles with proper labelling. The following chemical analysis should be performed on the water samples: determination of pH value, calcium and magnesium content, turbidity, sulphate, carbonate, nitrate and chloride contents; presence of organic matter and suspended solids.

20. The soil report should contain analysis of soil strata for the whole alignment and divide the entire length in zones & sub zones to define the bearing capacity and other relevant parameters of soil like C&Ø of similar properties of soil and present this data in tabulated/ graphical form at a scale of as desired by engineer incharge so that the entire soil profile is available at a glance. The report must be prepared by a qualified engineer having minimum qualification of M. Tech. in Soil Engg from a reputed institute. The soil report & analysis is required to be proof checked from NIT, Kurukshetra or equally reputed institute duly approved by Railway.

21. Submission of Drawings

- a) Preparation & submission of drawing of tunnel and its approaches, portals, adits, shafts, ventilation, lightning, safety arrangements, drainage, slope design, slope protection & counter measures, deep cuttings, protection works, track works, electrical & OHE works, installations, signaling and telecom works, and all related

&enabling works along with preparation of layout plans,GADs/ drawings, sections, sketches etc on the basis of standard railway drawings & specifications and as per schedule of dimensions of Indian Railway's with High Rise OHE. The rate includes submitting drawing on tracing paper of A-1 size along with ten hard copies, also on CD ROM. Cost of all labour, material tools & plants and machinery is included in the rate.

- b) The details of trial pit at every location shall be shown in drawing.
- c) The drawing shall be as per Railways norms and prevailing practice of Railway.
- d) The drawing shall be prepared with Auto CAD and shall be submitted on tracing paper along with 10 paper print & hard copies and CD ROM.
- e) The consultant shall handover all the data in digitized data concerning to the work to HRIDC including detailed calculations of design.

22. Cost estimate will include detailed schedule of quantity and cost for Construction of entire tunnel including approaches. This will include tunnelling & related activities, earthwork in formation and cutting, blanketing, ballast supply retaining walls, viaduct, drainage works, railing, footpaths, and their cost and other items as per item No.24 (E1b) of BOQ.

23. Submission of Design & Drawings

- a) After approval of detailed design, the consultant will submit detailed structural drawing of foundation, sub structure with arrangement of super structure (as per available RDSO/ Railway drawing of super structure). The design calculation shall be in details.
- b) The design and drawing of items will consists of approaches, portals, adits, shafts, ventilation, lightning, safety arrangements, drainage, slope design, slope protection & counter measures, deep cuttings, protection works, track works, electrical & OHE works, installations, signaling and telecom woks, and all related & enabling works along with preparation of layout plans, GADs/ drawings, sections, sketches as per codal provisions of Railways & IS Codes.
- c) The design shall be carried out conforming to the latest editions of Indian Railways Standard (IRS), Indian Road Congress (IRC) and Bureau of Indian standards (BIS), British Standards (BS), UIC Codes etc.
- d) Where there is conflict amongst IRS. IRC and BIS Specifications, the precedence shall be in the same order.
- e) Where there is no provision of specifications in IRS, the IRC conditions shall be referred to and followed.
- f) For items not covered in IRS/IRC specifications, BS 5400 shall be followed.
- g) Where applicable other relevant references and good practice shall be used if specific recommendations do not exist in IRS/IRC/BIS/BS Specifications.
- h) The decision of GM/Project shall be final and binding regarding interpretation of the clauses of the codes of practice and specifications under the special conditions.

- i) Consultant will prepare design basis note containing design criteria and get it approved and then proceed with the detailed design. Consultant will carry out design in sufficient details to the satisfaction of the HRIDC
- j) Consultant has to submit two copies of initial design calculations and six copies of drawings to HRIDC prior to final approval. After final approval, he will submit original drawings and two copies of design calculations to HRIDC. Design calculations should be properly typed and bound. One copy of all drawings will be submitted on reproducible tracing film and copy in Auto-CAD format in CD/Pen drive on completion of all design and drawings
- k) Design and drawing after approval shall be the property of HRIDC. They shall have exclusive right to use and reuse it elsewhere. The consultant shall have no claims whatsoever in this regard.

24. PROGRAMME OF WORK

Immediately on issue of letter of acceptance of this tender the contractor should submit programme of the work showing the activities work wise for completing the whole work within the stipulated period of completion as per schedule of deliverables in consultation with the Engineer-in-charge. Programme from time to time taking into consideration the latest progress achieved till then should be updated. This is to reiterate that the HRIDC reserves the right of terminating the contract as per General Conditions of Contract and forfeit/recover the amount equal to full Security Deposit and Performance Guarantee on full amount of work shown in acceptance letter.

PERFORMANCE BANK GURANTEE (UNCONDITIONAL)

To

Haryana Rail Infrastructure Development Corporation Limited,
(Name & Address.)

[Acting through _____ (Project Incharge) & Address of the Project]

WHEREAS _____ [name and address of Consultant] (hereinafter called “the Consultant”) has undertaken, in pursuance of Contract No. _____ dated _____ to execute “ _____ ” [name of Contract and brief description of Works] (hereinafter called “the Contract.”);

AND WHEREAS it has been stipulated by you in the said Contract that the Consultant shall furnish you with a Bank Guarantee by any Scheduled Bank in India as given Annexure-VII for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Consultant such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Consultant, up to a total of _____ [amount of Guarantee], _____ [amount in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of Guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Consultant before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Consultant shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid up to _____ (a date **60 days** from the date of completion of the work).

SIGNATURE AND SEAL OF THE GUARANTOR

Name of Bank:

Address:

Date:

FORM OF AGREEMENT

(To be executed on requisite value of stamp Papers)

AGREEMENT

THIS AGREEMENT made on _____ day of _____ (Month/year) between Haryana Rail Infrastructure Development Corporation Limited, HRIDC, SCO 17-19, 3rd Floor, Sec-17A, Chandigarh acting through (Managing Director, hereinafter called “the Employer/Engineer”) of the one part and _____ (name and address of the Consultant) (hereinafter called “the Consultant”) of the other part.

WHEREAS the Employer is desirous that certain works should be executed by the Consultant viz. **Contract No.** _____ (hereinafter called “the Works”, and has accepted a Bid by the Consultant for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH as follows:

- In this Agreement, words and expressions shall have the same meaning as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
- The following documents shall be deemed to form and be read and construed as part of this Agreement:
 - a. Letter of Acceptance of Bid
 - b. Notice Inviting Bid
 - c. Instructions to the Bidders
 - d. Form of Bid
 - e. Appendix to Bid
 - f. Special Conditions of the Contract
 - g. General Conditions of Contract
 - h. Terms of Reference (TOR) / Technical Specifications
 - i. Relevant codes and Standards
 - j. Bill of Quantities (BOQ)
- In consideration of the payments to be made by the Employer to the Consultant as hereinafter execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
- The Employer hereby covenants to pay the Consultant in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement executed the day and year first before written.

(Name, Designation and address of the authorized signatory)

(Name, Designation and address of the authorized signatory)

Signed for and on behalf of the Consultant in the presence of:

Signed for and on behalf of the Employer in the presence of:

Witness:

Witness:

1.

1.

2.

2.

Name and address of the witnesses to be indicated.

SECTION VI: TERMS OF REFERENCES (TOR)/ TECHNICALSPECIFICATIONS

TERMS OF REFERENCE (TOR)

1. GENERAL

HRIDC has been entrusted with the design and construction of New Board Gauge Railway line from Palwal to Sonipat(HORC) rail link project in Haryana State of India. The project alignment traverses generally through the plain terrain except for small portion of Aravali Hills near Sohna. The hills are in general of sedimentary rocks and geologically consist mainly of sand stone. The area falls in seismic zone-IV. The construction of this rail project will involve construction of one tunnel through hills. HRIDC now invites proposal for detailed design, survey, Geotechnical Investigation, etc of this tunnel.

Haryana Rail Infrastructure Development Corporation Limited (HRIDC), intends to appoint the consultant for *“Detailed Design, Geological Mapping, Geo Technical Investigations, and other ancillary works in connection with construction of Tunnel and its approaches in Sohna-Manesar Section of ‘Haryana Orbital Rail Corridor’ Project in the state of Haryana.”*

HRIDC will be the employer and firm will be executing agency for the works. The standards of output required from the appointed agency/firm are to be of the international level both in terms of quality and adherence to the agreed time schedule.

The broad scope of the present study has been identified as follows:

2. Objective

- 2.1. The main objective of the service envisaged is to carry out cost effective Detailed design, taking into consideration various parameters so that tender for construction of tunnels its approaches can be called.
- 2.2. The objectives of the Detailed design and Geotechnical investigation is to get assistance HRIDC to implement the project in conformity with Railway rules and regulation relevant specification, local laws, byelaws etc.
- 2.3. The standards of output required from the appointed designer and key personnel are of international level both in terms of quality and adherence to the agreed time schedule.
- 2.4. Deployment of requisite Personnel: The agency shall deploy qualified and experienced personnel's in design of tunnels. The key personnel, duly assisted by supporting staff, shall have requisite experience on the type of work they are deployed for and shall be full time available in the project site. The agency may, from time to time on its own volition, engage experts in different fields for enhancing the effectiveness of its key personnel as deemed necessary.

3. SCOPE OF WORK

The agency's scope of work shall be as below but not limited to:

- 3.1. Development of alignment of tunnel at its approaches including development of DTM modules.
- 3.2. Geotechnical Investigation, Geological Mapping, Geo-physical survey, Seismic refraction survey & 2D resistivity image mapping along the alignment of tunnel & its approaches.

- 3.3. Detailed design/Drawings/Estimate for the tunnel for calling tender for construction of tunnel.
- 3.4. Detailed design/ Estimate of complete safety system, surveillance system and other ancillary works in connection with tunnelling work.
- 3.5. The analysis, design and drawings shall be submitted for construction phase and final design phases.
- 3.6. The agency shall review the geo-tech investigation requirement. HRIDC on such advice shall get the geo-technical/geological investigation done. Agency shall analyse such data and incorporate the changes required in updating the design and planning from time to time. However, such investigation done as per the advice of agency shall be carried out by the agency itself.
- 3.7. Provide a Quality Assurance Plan.
- 3.8. Incorporate changes in design resulting from HRIDC representative design review.
- 3.9. Preparation of detailed report.
- 3.10. Coordination/Liasoning and preparing/updating the integrated drawings incorporating Civil, Track, S&T, Electrical and Mechanical works. The agency shall give the design of various fixtures, so that these are taken care of in schedule of dimension of the tunnel and preparation of detailed design thereof.

4. STAGES OF SUNMISSION OF VARIOUS DESIGN AND REPORTS

4.1. INCEPTION REPORT`

The inception report shall be submitted within 4 weeks after the LOA, comprising of the following:

- a) Collection of data information from all concerned and verifying it for accuracy and usage.
- b) The approach methodology to meet the requirement of TOR.
- c) Submission of outline design criteria and construction specification.
- d) The identification of design codes and standards.
- e) Proposed essential Geo-physical/Geological/Geo-technical investigation in consultation with HRIDC without unduly affecting the schedule of completion of the work.
- f) General arrangements drawings of all the components of complete tunnel work.

4.2. DESIGN

Design shall be submitted as per the details given in clause 14 of SCC.

It shall consist of the following:

4.2.1. DESIGN

The design shall provide HRIDC with indication of the manner in which the work will be performed in general and shall consist of key features pertinent to the design work. The design submission shall be coherent and complete set of the documents properly consolidated and indexed and shall fully describe the proposed pre-final design. It shall include but not being limited to the following;

- a) Design criteria/standards.
- b) The submission of design manuals/codes/standards.

- c) Completion of ground survey work is necessary and processing of data.
- d) Completion of field geotechnical work.
- e) Optimum tunnel sizing. (for double line BG in conformity with IRSOD with provision of High rise OHE. Also most economical construction methodology should be designed.)
- f) Adequacy of Tunnel design at DFC Tunnel crossing if same (crossing of both Tunnel) is unavoidable.
- g) Report on recommendation of various components of tunnel i.e. ventilation system, drainage, safety management, disaster management, lightening system, communication system, monitoring devices for performance of the tunneletc.
- h) Holding discussions and presentations at various level to get it approved in principle from HRIDC.
- i) The dimension of all major features, structural elements and members.
- j) Specification of all materials.
- k) Potential forces and movements due to all possible loadings and actions on the structures.
- l) The layout and the typical details of support system.
- m) Electrical and mechanical services and equipment and their interaction with these structures.
- n) Proposed method of predicting the ground movements during construction of tunnel.
- o) Construction methodology.
- p) Detailed design of ballast less track/ ballasted track.

The Design submission shall also contain the following:

i. DRAWINGS/ DETAILED ESTIMATE

The detailed design submission shall include drawings& detailed estimate including detailed calculations duly proof checked by IIT/NIT.

ii. DESIGN MANUAL

The Design manual shall incorporate all design requirements, standards codes, loading cases etc.

Permissible movements and deflections, material properties and all other documents or matters which are relevant to and govern the design. The design Manual shall refer to all materials, codes and standards used, making clear their specific applications. The Design Manual shall be produced so that it can be used by those involved in the preparations or review of the design of the permanent works as comprehensive reference text and efficient document.

iii. GEOTECHNICAL INTERPRETATIVE REPORT:

A report including site investigation results and covering the Geo-technical interpretation of site investigation work including that undertaken by the agency in sufficient detail to confirm and justify parameters used in the geo-technical designs. The report shall include the full logs and descriptions of confirmatory bore holes drilled by the agency.

5. INSTRUCTIONS TO BE FOLLOWED BY AGENCY WHILE PROVIDING SERVICES

- 5.1. AUGMENTATION OF DATA-** In the Conduct of the work the agency shall co-operate and associate fully with HRIDC, which shall provide available relevant data and reports, but these may or may not be adequate. The agency shall supplement by completing data considered necessary and shall be solely responsible for the analysis and interpretation of all data received and collected and for the conclusions and recommendations contained in the reports.
- 5.2. REFERENCE CODES-** The agency shall utilize the applicable Indian codes. All relevant Indian Acts and Regulations shall also be complied with. Should the agency propose to use alternative Standards or Codes of Practice they shall submit two copies of such standards or codes with justification for their use to HRIDC for review and acceptance within 3 weeks from receipt of the LOA.
- 5.3.** The basic premise of this contract is to carry out preparation of DTM module Geotechnical Investigation, Geological Mapping and detailed design for economical and safe construction of the tunnel including its approaches for BG double line in conformity with IRSSOD with High Rise OHE within time period specified in the contract. The agency shall organize its resources accordingly and assist HRIDC pro-actively and justifiably.
- 6. USE OF PROPRIETARY ITEMS –** The agency shall ensure that there are no named or proprietary products in the documents or on drawings. Agency shall indemnify HRIDC from violation of any copyright infringement and HRIDC will not be responsible for any act of negligence / omission in this respect.

7. DESIGN LIFE

The design life of the permanent civil engineering works shall be 120 years.

8. DESIGN SUBMISSIONS/APPROVAL/REVIEW PROCEDURES

- (1) HRIDC representative shall review submissions of Design Data. The form and detail of the review shall be as determined by HRIDC and will not absolve the agency of the responsibility for the design under the contract.
- (2) In obtaining all required and / or statutory approvals that relate to the submission including where appropriate, approval of concerned government authorities, the agency shall assist HRIDC wherever required.
- (3) All submissions shall be accompanied by two original copies of a Design Certificate signed by the agency.

9. SUBMISSION OF DESIGN CALCULATIONS

1. Unless otherwise required by HRIDC, calculations relevant to the Design shall be submitted for review with the respective Design Submissions. The HRIDC Representative may require the submission of applicable software including on house software programmers/worksheets developed by the agency, computer input and programme logic for its review prior to the acceptance of the computer output. Such software shall be given unhindered access if need be to the representative of HRIDC in the office of agency.
2. The agency shall prepare and submit a comprehensive set of calculation for the Pre-Final Design in a form acceptable to HRIDC. Should the design of the Permanent Works be

revised thereafter and such revision renders the calculations as submitted obsolete or inaccurate, the agency shall prepare and submit the revised calculations.

10. SCHEDULE OF PAYMENTS

HRIDC shall make payments to the agency as mentioned in the Bill of Quantities.

11. SETS OF DRAWINGS/ DESIGN / REPORTS TO BE SUBMITTED BY CONSULTANT

A soft copy of each item listed below shall be delivered together with the number of hard copies indicated below. All material shall be delivered as follows.

Inception Report	6	Copies
Draft Design Submission	2	Sets of drawings A0 size
	6	Sets of drawings A1 size
	6	Sets of design calculations
	6	Copies of design, various reports / recommendations
Final Design - Submission	2	Complete sets of drawings A0 size
	6	Complete sets of drawings A1 size
	6	Complete sets of design calculation for each components/ accessories
	6	Sets of construction Specifications/quality formats etc.
	6	Copies of design report/recommendations
Geotechnical Investigation Report	6	Copies of final report

12. PROFESSIONAL INDEPENDENCE

- i) The agency shall have no direct or indirect interests in commercial, manufacturing or contacting activities that might tend to influence its professional judgement. It is remunerated solely by the fees paid to it by HRIDC.
- ii) It shall approach all assignments objectively and by using technical and economical principles provided solutions which serve the best interests of HRIDC.
- iii) The agency shall give a declaration that its firm has no financial or managerial ties with other organisations that could influence its independence.

SECTION VII: CERTIFICATION OF FAMILIARIZATION

Certificate of familiarization

- A. I/We hereby solemnly declare that I/We have visited the site/place of work and have familiarized myself/ourselves of the working conditions there in all respects and in particular, the following:
- a) Topography of the Area.
 - b) Soil conditions at the site of work.
 - c) Sources & availability of Construction material.
 - d) Borrow areas of earth.
 - e) Rates for construction materials.
 - f) Availability of local labour, both skilled and unskilled and the prevailing labour rates.
 - g) Availability of water & electricity.
 - h) The existing roads and access to the site of work.
 - i) Availability of space for putting labour camps. Officers, stores, godown, sheds engineering yards etc.
 - j) Climatic condition and availability of working days.
 - k) Prevailing all taxes, VAT, duties etc.
- B. I/We have kept myself/ourselves fully informed of the provisions of this bid document comprising Instructions to the Bidders, General Conditions of the Contract, Special Conditions of Contracts and Special Technical Specifications/ Conditions of contract apart from information conveyed to me/us through various other provisions in this bid document.
- C. I/We have quoted my/ our rates as ‘Percentage above / below / at par ‘ and quoted against blank items by rates in figure and words, with total cost as per Items Rates and Quantities (BOQ), in FINANCIAL BID taking into account all the factors given above.

(Signature of Bidder/s)

Date: _____

Place: _____

SECTION VIII: BILL OF QUANTITIES

Name of work –Detailed Design, Geological Mapping, Geo Technical Investigations, and other ancillary works in connection with construction of Tunnel and its approaches in Sohna-Manesar Section of ‘Haryana Orbital Rail Corridor’ Project in the state of Haryana

BILL OF QUANTITIES

SN	NS item No.	Item wise description of work (full description)	Unit	Qty	Rates (in Rs)	Amount (in Rs)	LAR Reference
A: DESIGN & SURVEY OF ALIGNMENT							
1	A1	Development of proposed Broad-Gauge double line Railway alignment of Tunnel and its approaches between Sohna-Manesar(Approx. 8 Km long along proposed alignment as per preliminary survey) in the state of Haryana with the help of Latest optimizing software and Digital Terrain Model (DTM) developed from digitized survey of India Toposheets of the proposed alignment with deliverables. Agency shall study / examine DFC alignment & the alignment studies by the earlier agency appointed by HRIDC and based on their independent assessment should recommend: - I. Most suitable & economical alignment keeping the length of Tunnel minimum possible. 2-3 alternate alignment should be identified and analyzed before optimizing the alignment. II. Optimum section for double line Broad Gauge in conformity with Indian Railways Standard Schedule of Dimensions (with latest updations) with provision of High Rise OHE. Also most economical construction methodology should be designed. III. Adequacy of Tunnel design at DFC Tunnel crossing if same (crossing of both Tunnel) is unavoidable.	LS	1			
		Note: HRIDC shall authorize the agency for collection of digitized toposheets from Survey of India. In case digitized toposheets are not available with Survey of India the payment for collection of toposheets and their digitization shall be made as per item (i) of B1 below.					
		Stage wise payment for this item shall be done as follows: (i) Completion of DTM & submission of alternate alignments proposal: 30% (ii) Submission of draft Report: 30% (iii) Submission of Final report and acceptance by HRIDC: 40%					
B: SURVEY							
2	B1	DIGITIZATION OF TOPOSHEET					
		Collection, Scanning and Digitization of survey of India (SOI) Toposheets in 1:50000 scale with contour in MSL and scale	Nos	2			

		(interval 100m major and 20m minor)/ Geological maps (sheets)/ Forest maps (sheets) with design alignment Centre line co-ordinates & levels marked in reference to horizontal datum as MSL and grid co-ordinates should conform to horizontal & Vertical datum of survey of India toposheets. The work includes Service of engineers, scientists, surveyors, draughtsman, CAD operators, labors, helpers and others (computers, printers & tracing etc.)					
		Payment terms: Stage wise payment for this item shall be done as follows: (i) Collection, Scanning & Digitization of toposheets: 40% (ii) Submission of final toposheets with alignment and other features duly marked to HRIDC: 60 %					
		FINAL LOCATION SURVEY					
3	B2	Carrying out final location survey with total station (Having latest accuracy), traversing of area for establishment of control points for the most suitable alignment finalized in item no. 1 above including traversing grid network of Control Points marked on toposheets of Survey of India. Development of plan/ L-section etc (approx. 8 km length) for most suitable alignment,. The work includes service of engineers, scientists, surveyors, draughtsman, CAD operators, labors, helpers and others (computer, printers & tracing etc.). The agency shall provide the final location alignment in digital format to HRIDC.	LS	1			
		Payment terms: Stage wise payment for this item shall be done as follows: (i) Completion of field works & submission of Draft Report including plans, L-Section, alignment, etc : 60% (ii) Submission of Final Report & acceptance of Report by HRIDC: 40%					
4	B3	Establishment of DGPS Control Points along the Proposed alignment of tunnel and approaches(as marked on toposheet) and report generation as per format approved by Engineer in charge. (Payment of RCC Pillars shall be paid separately as per BOQ item B-6).	Nos	10			
		Payment terms: Stage wise payment for this item shall be done as follows: i) Completion of field works & submission of Draft Report: 60% ii) Submission of Final Report & acceptance of Report by HRIDC: 40%					
5	B4	Leveling by autolevel (Having latest accuracy) of the area for Establishment/re-establishment of Control Points on existing	LS	1			

		alignment and report generation as per format approved by Engineer in charge					
		<p>Payment terms: Stage wise payment for this item shall be done as follows:</p> <p>i) Completion of field works & submission of Draft Report: 60% ii) Submission of Final Report & acceptance of Report by HRIDC: 40%</p>					
6	B5	PERMANENT PILLAR					
		Casting and fixing of Permanent pillar size 500 x 500 x 1000mm of M25 Grade RCC with provision of 700mm long M.S. Angle of size 50 x 50 x 5mm with brass nailing on the MS plate with embossing the coordinates on the MS Plate for marking the Control Points, Portal locations, change point of curvature and other prominent geometrical survey points related to the alignment finalized in the item B2 above. The work included supply of materials required for construction of pillars, mason, labours and material carriage charge etc.	Nos	10			
C: GEOLOGICAL MAPPING							
7	C-1	Geological mapping of the proposed alignment for a corridor width of 500m (250m on either side) in scale 1:25000 and submission of geological plan, L-Section along the design alignment in relevant areas (1:25000H & 1:2500V) and cross section across the valleys/nallahs/streams and across the important geological features including scanning and digitization of Geological Survey of India Maps of the area, survey work required (by Total Station/GPS) for geological mapping and geophysical survey.	KM	5			
		<p>Payment terms: Stage wise payment for this item shall be done as follows:</p> <p>i) Completion of field works & collection of Data & submission of Draft Report: 60% ii) Submission of Final Report & acceptance of Report by HRIDC: 40%</p>					
8	C-2	Geological mapping of the proposed alignment including structural (Faults/thrusts, Shear zones, Fold, Joints etc) lithological ,tectonic mapping and drainage pattern mapping for a corridor width of 200 m (100m on either side) in scale 1:2000 of critical areas and submission of geological plan, L-section along the design alignment in relevant areas (1:5000H & 1:500V) and cross section across the valleys/ nallahas/ streams and across other important geological features including scanning and digitization of Geological Survey of India Maps of the area, survey work required (by Total Station/ GPS) for geological mapping and	KM	4.5			

		geophysical survey . The work included service of engineers, scientists, surveyors, draughtsman, CAD operators, labors, helpers and others (computer, printers & tracing etc)					
		Payment terms: Stage wise payment for this item shall be done as follows: i) Completion of field works & collection of Data & submission of Draft Report: 60% ii) Submission of Final Report & acceptance of Report by HRIDC: 40%					
	C4	GEOPHYSICAL SURVEY					
9	C4a	Mobilization and De-Mobilization charges of Equipments at site for Seismic Refraction survey and 2-D Resistivity Survey as per item C4b & C4c below. The payment shall be made only once after completion of the Geophysical survey, as per item C4b and C4c.	LS	1			
		SEISMIC REFRACTION SURVEY					
10	C4b	Seismic Refraction Survey including data acquisition, data processing and interpretation for deciding revised alignment at portals of tunnels and viaducts/major bridge locations. The work included service of engineers, scientists, surveyors, draughtsman, CAD operators, labors, helpers and others (computer, printers & tracing etc.)	Mtr	500			
		Payment terms: Stage wise payment for this item shall be done as follows: i) Completion of field works & collection of Data & submission of Draft Report: 60% ii) Submission of Final Report & acceptance of Report by HRIDC: 40%					
		Note: The quantity may change as per the geology and topography of the alignment finalized. The location and the quantity shall be decided and executed with the approval of Railway.					
		RESISTIVITY SURVEY					
11	C4c	2-D Resistivity image mapping including data acquisition, data processing and interpretation for deciding revised alignment for viaducts/bridge site. The work included service of engineers, scientists, surveyors, draughtsman, CAD operators, labors, helpers and others (computer, printers & tracing etc)	Mtr	500			
		Payment terms: Stage wise payment for this item shall be done as follows: i) Completion of field works & collection of Data & submission of Draft Report: 60% ii) Submission of Final Report & acceptance of Report by HRIDC: 40%					
		Note: The quantity may change as per the					

		geology and topography of the alignment finalized. The location and the quantity shall be decided and executed with the approval of Railway.					
D: GEOTECHNICAL INVESTIGATION							
12	D1	Mobilization and De-Mobilization charges of drilling equipments and manpower to the project site. The payment shall be made only once after completion of the Geotechnical Investigation.	LS	1			
13	D2a	Exploratory drilling of Boreholes 150mm diameter boreholes in all type of soil including conducting standard penetration test at specified depth and collection of disturbed, and undisturbed samples from bore holes. The rate includes cost of manpower, machinery, etc. complete.	M	200			
14	D2b	Drilling of Nx size bore holes (75 mm diameter) in all types of rock (boulder, weathered and fresh rock) and collection of rock core samples from bore holes at tunnel sites. The rate includes cost of manpower undisputed, machinery etc. complete. In case of inclined boring, the length shall be measured along the borehole length.					
		a) Up to 50M depth	M	450			
		b) Beyond 50M up to 100M depth	M	100			
15	D3	In-situ permeability test in bore holes at tunnel sites	Nos	5			
16	D4	Erection of drilling equipment from one bore hole site to another bore hole site and construction of working platform for drilling machine including making of approaches	Nos	9			
	D5	Laboratory tests					
17	D5A	Soil samples i. Natural Moisture content and Natural Dry Density ii. Grain size analysis iii. Atterberg's limit iv. Direct shear test v. Triaxial shear test vi. Consolidation Test vii. Specific Gravity viii. Silt factor	Per Sample	6			
18	D5b	Rock Samples i. Density ii. Specific Gravity iii. Water absorption iv. Uniaxial compressive strength	Per Sample	20			
19	D5c	Deformability of Rock materials (Young's Modulus, Modulus of Deformability, Stress-Strain Curve, Failure Energy) as per IS 9221 & 9143 for Rock.	Per Sample	20			
20	D5d	Petrographic description of rock (Grain size, Mineral Content, Texture etc) for rock.	Per Sample	20			
21	D5e	Tensile strength for rock material (Indirect Tensile strength, Brazilian Test) as per IS 10082 for rock	Per Sample	20			
22	D5f	Hardness and Abrasiveness of Rock	Per Sample	20			

		(together with CAI-Index Abrasive Test)				
E: MISC. WORKS						
23	E-1(a)	Detailed design and Drawings for the purpose of preparing the detailed cost estimate of the project for tunnels and its approaches, Portals, adits, shafts, ventilation, lightning, safety arrangements, drainage, slope design, slope protection & counter measures, deep cuttings, protection works, track works, electrical & OHE works, installations, signaling and telecom woks, and all related & enabling works along with preparation of layout plans, GADs/ drawings, sections, sketches etc alongwith recommendations for most suitable/ economical construction techniques. The design shall be as realistic as possible, based on codal provisions, in conformity with Indian Railways standard schedule of dimensions (with latest updations) with provision of High Rise OHE, international best practices, thumb rules, empirical formula and based on past practices adopted in similar Indian Railway projects and considering actual geological information in consultation with Employer. Note:- (i) The detailed design should be accompanied with a detailed Report and drawings giving technical parameters, codal provisions etc. used in the design along with justifications duly proof checked by IIT/NIT.	LS	1		
		Payment terms: Stage wise payment for this item shall be done as follows: i) Submission of Draft Detailed design & drawings: 60% ii) Final Design & Drawings after proof checked by NIT/IIT: 40%				
24	E-1(b)	Preparation of detailed Cost Estimate of the complete Project for commissioning as per detailed design done in item E-1(a) above and as per formats of estimates prepared by Indian Railway for similar projects. This includes working out quantities and cost of various components of the tunnel, signaling and telecom, tunnel ventilation, electrical & OHE works, diesel traction works, E&M, illumination, surveillance system, track works, land, roads, earthwork, protection works, forest clearance, other ancillary works etc. as a complete job as per provisions in Indian Railway Engineering Code. Part estimate of Civil, tracks, S&T, Electric works, Diesel traction and Electric traction (OHE) works shall be brought out separately. The work also includes submission of Design Basis Report for various types of structures envisaged in completion of the Project and submission of standard Tender document for Detailed Design, build	LS	1		

		&operate EPC- contract of Tunnel & approaches as per direction of Engineer.					
		Payment terms: Stage wise payment for this item shall be done as follows: i) Submission of draft Detailed cost estimate based on approved design & drawings: 60% ii) Submission of Final detailed cost estimate alongwith detailed report as per note below: 40%					
		Note- (i) The estimate should be accompanied with detailed Report giving methodology and basis for Technical parameters, quantities and rates adopted in the preparation of estimate.					
		(ii) The Project estimate should be as realistic as possible considering least risk to Railway regarding its exceedance over Detailed Estimate during execution.					
TOTAL							

Note:

1. The quantities shown against items above are to serve as a guide only. HRIDC reserves the right to alter quantities according to the needs.
2. All items are for complete items of work including all labour and material, all lead, lifts, ascends, descends, crossing obstructions etc. including loading, unloading, handling re-handling, taxes, octroi, royalty, compensation etc. complete.
3. The rates should be quoted including the payment of octroi toll tax/sales/trade tax or any other tax as leviable by the State Government/ local bodies etc. GST shall be paid extra.

I/we understand that I/we am/are not entitled to any other payment on any account whatsoever except at the tendered rates quoted against each item for fully completed work as per conditions of contract.

Signature of the tenderer/s _____

Address

SECTION IX: GENERAL CONDITIONS OF CONTRACT

General Conditions of Contract (GCC)

1. HRIDC's General Condition of Contract shall be followed and will be a part of the Contract
2. Additional definitions mentioned in these tender documents elsewhere will be followed for GCC
3. In case of any ambiguity in any definition, the decision of HRIDC regarding the interpretation shall be final and binding.
4. Wherever there is conflict in any condition between General Conditions of Contract (GCC) and Special conditions of Contract (SCC) mentioned in the tender documents, the conditions mentioned the Special conditions of Contract will prevail. However, Engineer's decision in this connection shall be final and binding.

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2.0	HEADING AND MARGINAL NOTES
3.0	SINGULAR, PLURAL AND GENERAL
4.0	COMMUNICATION AND LANGUAGE OF CONTRACT
5.0	LAWS GOVERNING THE CONTRACT
6.0	INSPECTION OF SITE AND SITE DATA
7.0	CONTRACTOR'S UNDERSTANDING
8.0	PERFORMANCE SECURITY & RETENTION MONEY
9.0	INSURANCE
10.0	COMMUNICATION BETWEEN EMPLOYER/ENGINEER AND CONTRACTOR
11.0	DUTIES OF ENGINEER AND ENGINEER'S REPRESENTATIVE
12.0	GENERAL OBLIGATIONS OF THE CONTRACTOR
13.0	SUBCONTRACTING
14.0	PROVISIONS OF EFFICIENT AND COMPETENT STAFF
15.0	PROGRAMME OF WORK
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17.0	ACCESS TO SITE OF WORK
18.0	SETTING OUT
19.0	TEMPORARY WORKS
20.0	SPECIFICATIONS AND DRAWINGS
21.0	INDEMNITY BY THE CONTRACTOR
22.0	DAMAGE TO LIFE AND PROPERTY
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24.0	OTHER SAFETY PROVISIONS
25.0	PROTECTION OF ENVIRONMENT
26.0	CARE OF WORKS
27.0	USE OF EXPLOSIVES
28.0	OCCUPATION AND USE OF LAND
29.0	EXCAVATED MATERIALS
30.0	RELICS AND TREASURES
31.0	CO-OPERATION WITH OTHER CONTRACTORS
32.0	WORK DURING NIGHT
33.0	SHEDS, STORES, YARDS
34.0	ENGINEER'S MATERIALS
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36.0	PLANT AND MATERIALS OF THE CONTRACTOR
37.0	CONTRACTOR TO KEEP SITE CLEAR
38.0	HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS
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GENERAL CONDITIONS OF CONTRACT

1) DEFINITIONS

In the Contract, as herein after defined, the following word expressions shall have the meanings hereby assigned to them, except where the context requires otherwise.

"Client or Principal Employer/Employer or Owner" HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED, A JV of Ministry of Railways and Govt. of Haryana (HRIDC in abbreviation) acting through its Managing Director or any other authorized officer and shall include their legal successors in title and permitted assignees.

"Engineer or Engineer in Charge" means the Project Head of HRIDC (Employer) or any other officer authorized by the Employer to act on his behalf and for the purpose of operating the contract.

"Engineer's Representative" means any official nominated from time to time by the Engineer to act on his behalf.

"Contractor" means the individual, firm, Company, Corporation, Joint Venture, or Consortium whether incorporated or not, who enters into the Contract with the Employer/Engineer, and shall include its heirs, executors, administrators, successors, legal representatives, as the case may be.

"Contractor's Representative" shall mean the person responsible for execution of the contract who shall be so declared by the Contractor and who shall be authorised under a duly executed power of attorney to comply the instructions and to use, receive materials issued by the Engineer to the Contractor for works. He shall be capable of taking responsibility for proper execution of works.

"Sub-Contractor" means the individual, firm, Company, Corporation, Joint Venture or Consortium, having direct Contract with the Contractor and to whom any part of the work has been sublet by the Contractor and shall include his heirs, his executors, administrators, successors, legal representatives, as the case may be.

"Other Contractors" means the individual, firm, Company, Corporation, Joint Venture or Consortium employed by or having a Contract directly or indirectly with the Client/Employer/Engineer other than the Contractor.

"Tenderer or Bidder" means the individual, firm, Company, Corporation, Joint Venture or Consortium submitting a bid/tender.

"Scheduled Bank" means a bank included in the second schedule to the Reserve Bank of India Act, 1934, or modification thereto.

"Contract" shall mean and include the Agreement or Letter of Acceptance, the accepted Bill of Quantities and Rates, the General Conditions of Contract, Special Conditions of Contract, Appendix to Tender, Form of Bid, Instructions to the Tenderers, Drawings, Specifications and other Tender Documents.

"Tender or Bid" means the offer (Technical and/or Financial) made by individual, firm, Company, corporation, Joint Venture or Consortium for the execution of the works.

"Specifications" means the specifications referred to in the Contract and any modification thereof or addition thereto, or as may from time to time be furnished or approved in writing by the Engineer.

"Drawings" means the Drawings annexed to the Contract or referred in it and shall include any modifications of such Drawings and further Drawings as may be issued or approved by the Engineer.

"Bill of Quantities (BOQ)" means list of items of work, their quantities and rates.

"Original Contract Value" means the sum stated in the letter of Acceptance/Contract Agreement.

"Contract Value" means the original contract value subject to the adjustments in accordance with the provisions of the Contract.

"Temporary Works" means all enabling works of every kind required for the execution of the works.

"Permanent Work(s)/ Work(s)" means the works (other than temporary works) to be executed in accordance with the Contract or part/s thereof as the case may be and shall include extra or additional, altered or substituted items of work as required for performance of the Contract.

"Construction Plant" means all machinery, appliances or things of whatsoever nature required for the execution, completion and maintenance of the works, but does not include material or other things intended to form or forming part of the permanent works.

"Site" means the land and/or other places on, under, in or through which the works are to be carried out, and any other lands or places provided by the Client/Employer/Engineer for the purpose of the Contract.

"Material/s" means all equipment, components, fittings and other materials including raw materials, which form part of the permanent works.

"Test" means such tests as prescribed in the Contract or by the Engineer or Engineer's Representatives, whether performed by the Contractor or by the Engineer or his Representative, or any agency approved by the Engineer.

"Approval or Approved" means approval in writing including subsequent written confirmation of previous verbal approval.

"Defect Liability Period" means the specified period of defects liability from the date of completion of the work as certified by the Engineer.

"Letter of Acceptance" means the letter from the Employer or the Engineer to the Contractor, conveying acceptance of the Tender.

"Month" means the Gregorian calendar month.

"Day" means the calendar day.

"Time" expressed by hours of the clock shall be according to the Indian Standard time.

"Tender Date" means closing date fixed for receipt of tenders as per notice inviting tender or extended by subsequent notification.

"Rupees"(or Rs. Or ` in abbreviation) shall mean Rupees in Indian currency.

2) HEADING AND MARGINAL NOTES

The top heading and marginal notes given in the tender or Contract documents are solely for the purpose of facilitating reference and shall not be deemed to be part thereof and shall not be taken into consideration in the interpretation or consideration thereof.

Notices, consents, Approvals, Certificates and Determination.

Wherever in the Contract provision is made for giving or issue of any notice, consent, approval certificate or determination, it shall be in writing and the words notify, certify or determine shall be construed accordingly.

3) SINGULAR, PLURAL AND GENERAL

Words importing the singular only also include the plural and vice versa where the context requires. Similarly, words importing masculine gender also include the feminine gender.

4) COMMUNICATION AND LANGUAGE OF CONTRACT

Communication to be in writing

4.1 All notices, communications, references and complaints by either party to the Contract shall be in writing in English or Hindi. Communication from only authorised representative of the Contractor shall be entertained.

4.2 Language of Contract

The Contract document shall be drawn up in English.

5) LAWS GOVERNING THE CONTRACT

The Contract shall be governed by the laws in force in India.

6) INSPECTION OF SITE AND SITE DATA:

The Employer/Engineer shall make available with Tender Documents such data on hydrological and sub-surface conditions, if any, obtained from investigations undertaken relevant to the

works. The tender shall be deemed to have been based on such data, if provided, but the Contractor shall be responsible for his own interpretation of all such data.

The Contractor shall be deemed to have inspected and examined the site and information available in connection therewith and to have satisfied himself fully before submitting his bid about the sub-surface conditions, the hydrological and climatic conditions, the extent and nature of work and materials necessary for the completion of the works, the means of access to the site and accommodation he may require. He shall also be deemed to have obtained all necessary information regarding risks, contingencies and all other circumstances which may influence or affect the contract.

7) CONTRACTOR'S UNDERSTANDING

The Contractor shall be deemed to have satisfied himself, before tendering, as to the correctness and sufficiency of his tender for the works and of the rates and prices stated in the Bill of Quantities, all of which shall except in so far as it is otherwise provided in the Contract, cover all his obligations under the Contract and all matters and things necessary for the proper execution, completion and maintenance of works.

8) PERFORMANCE SECURITY & RETENTION MONEY

For contracts valuing upto Rs.10 lacs, no performance security shall be required to be submitted by the Contractor.

Performance Security for Contracts valuing more than Rs. 10 lacs:

The successful bidder shall submit a Performance Guarantee (PG) in the form of irrevocable bank guarantee on the proforma annexed as Annexure-II from any Scheduled Bank for an amount of 5% (Five percent) of the contract value. The value of PG to be submitted by the Contractor will not change for variation upto 25% (either increase or decrease). In case during the course of execution, value of contract increases by more than 25% of the original contract value, an additional Performance Guarantee amounting to 5% (five percent) for the excess value over the original contract value should be deposited by the contractor.

Alternatively, the performance security can be furnished by the Contractor in the form of Fixed Deposit Receipt (FDR) from a scheduled bank endorsed in favour of the Employer.

The successful bidders, who choose to submit FDR as performance Guarantee, should avail the facility of auto-renewal at the time of placement of initial deposit, in order to avoid loss of interest after maturity of the FDR. HRIDC will not be responsible for any loss of interest if the contractor does not opt for auto renewal facility. No claim on this account will be entertained.

PG shall be submitted by the successful bidder after the letter of acceptance has been issued, but before signing of the agreement. The agreement should normally be signed within 28 days after the issue of LOA and the PG shall also be submitted within this time limit. This guarantee shall be initially valid upto the stipulated date of completion plus 60 days beyond that. In case, the time for completion of work gets extended, the contract or shall get the validity of PG extended to cover such extended time for completion of work plus 60 days.

No payment under the contract shall be made to the Contractor before receipt of performance security.

Failure of the successful tenderer to furnish the required performance security shall be a ground for the annulment of the award of the Contract and forfeiture of the Earnest Money Deposit.

Retention Money:

Retention money for all contracts shall be recovered from on account/ final bills of the Contractor @ 10% of gross value of each bill after adjusting Earnest Money Deposit (EMD) amount till the amount so recovered including EMD amount adds upto 5% of the contract value of the work.

No interest shall be payable to the Contractor on the amount retained in cash towards retention money.

Release of Performance Security:

Performance Security shall be returned to the Contractor, subject to the issue of Completion Certificate by the Engineer in accordance with clause 65 of these conditions. This shall not relieve the Contractor from his obligations and liabilities, to make good any failures, defects, imperfections, shrinkages, or faults that may be detected during the defect liability period specified in the Contract.

Wherever the contract is rescinded, the security deposit shall be forfeited and the Performance Security shall be cashed and the balance work shall be got done independently without risk and cost of the failed contractor. The failed contractor shall be debarred from participating in the tender for executing the balance work.

The Engineer shall not make a claim under the Performance Guarantee (PG) except for amounts to which HRIDC is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:-

1. Failure by the contractor to extend the validity of the PG as described herein above, in which event the Engineer may claim the full amount of the PG.
2. Failure by the contractor to pay HRIDC any amount due, either as agreed by the contractor or determined under any of the Clauses/ Conditions of the agreement, within 30 days of the service of notice to this effect by Engineer.
3. The contract being determined or rescinded under provision of the GCC the PG shall be forfeited in full and shall be absolutely at the disposal of the Engineer.

Release of Retention Money:

- i) The Retention Money shall be released to the Contractor after preparation of final bill and acceptance of the same by the Contractor and after the expiry of the defect liability period specified in the Contract, reckoned from the date on which the Engineer shall have issued the Certificate of Completion comprising the whole of works. The retention money shall be released after all failures, defects, imperfections, shrinkages and faults have been

rectified by the Contractor to the satisfaction of the Engineer and Defect Liability certificate is issued by the Engineer.

ii) Release of 50% Retention Money against Bank Guarantee/FDR:

a) For contracts valuing less than Rs.30 Crores:

If requested by the contractor, 50% of the Retention Money may be released on satisfactory completion of works against submission of Bank Guarantee for an equivalent amount by the Contractor in the performa annexed as Annexure-III from any scheduled Bank in India. This Bank Guarantee shall be kept valid till the period of three months beyond the expiry of Defect Liability Period. Fixed Deposit Receipt (FDR) from a scheduled bank endorsed in favour of the Employer can be submitted by the Contractor in lieu of the Bank Guarantee for release of 50% Retention Money.

b) For contracts valuing 30 Crores or more:

If requested by the contractor, 50% of the Retention Money may be released at a stage when full amount of retention money (i.e. 5% of the contract value) has been recovered

at the stage when not less than 50% financial progress has been achieved against submission of Bank Guarantee for an equivalent amount by the Contractor in the performa annexed as Annexure-III from any Scheduled Bank in India. This Bank Guarantee shall be kept valid till the period of three months beyond the expiry of Defect Liability Period.

Where different defect liability periods are applicable to different parts of the works, the expression - "expiration of the defect liability period" shall for the purpose of this clause be deemed to mean the expiry of last of such periods.

9) INSURANCE

Depending on the nature of work, Contractor's All Risk (CAR) shall be obtained by Employer/Engineer at his own cost as per the requirement. Employer/Engineer may take necessary add on covers and voluntary excess specified elsewhere in the contract, which shall be binding on the Contractor. At the time of taking policy, possible time over-run, if any, may be taken into account in deciding the period/validity of the policy. The above insurance shall cover the risks normally covered under the CAR policy. Any item not covered under the above policy shall be the responsibility of the Contractor.

Contractor's claims, if any, shall be entertained within the scope of Insurance policy taken by Employer/Engineer. This will be subject to:-

Risk covered and voluntary excess selected by Employer/Engineer.

Claims on realisation shall be passed to the Contractor according to value of the claims accepted by the insurance company for his damaged portion of work after deducting 15% towards services rendered by Employer/Engineer for processing the claim(s). The amount so disbursed to the Contractor(s) shall be limited to the amount calculated on the basis of his accepted rates in the contract with the Employer/Engineer.

Before commencing of works, it shall be obligatory for the Contractor to obtain, at his own cost, insurance cover in the joint name of the Contractor and Employer from reputed companies under the following requirements:

Liability for death of or injury to any person or loss of or damage to any property (other than the work) arising out the performance of the Contract.

Construction Plant, Machinery and Equipment brought to site by the Contractor.

Any other insurance cover as may be required by the law of the land.

The Contractor shall provide evidence to the Employer/Engineer before commencement of work at site that the insurances required under the contract have been affected and shall within 60 days of the commencement date, provide the insurance policies to the Employer/Engineer. The Contractor shall, whenever, called upon, produce to the Engineer or his representative the evidence of payment of premiums paid by him to ensure that the policies indeed continue to be in force.

The Contractor shall also obtain any additional insurance cover as per the requirements of the Contract.

The Employer/Engineer shall not be liable for or in respect of any damages or compensation payable to any workman or other person in the employment of the Contractor or his sub-contractor or petty contractor. The Contractor shall indemnify and keep indemnified the Employer/Engineer against all such damages and compensation for which the Contractor is liable.

The Policies of the Contractor shall remain in force throughout the period of execution of the works and till the expiry of the defect liability period except for any specific insurance covers necessary for shorter period.

If the Contractor fails to effect or keep in force or provide adequate cover as acceptable to the Engineer in the insurance policies mentioned above, then in such cases, the Engineer may effect and keep in force any such insurance or further insurance on behalf of the Contractor. The recovery shall be made at the rate of 1.5 times the premium/premiums paid by the Engineer in this regard from the payment due to the Contractor or from the Contractor's Performance Security. However, the Contractor shall not be absolved from his responsibility and/or liability in this regard.

10) COMMUNICATION BETWEEN EMPLOYER/ENGINEER AND CONTRACTOR

Instructions in writing

Instructions given by the Engineer shall be in writing, provided that if for any reason the Engineer considers it necessary to give any instructions orally, the Contractor shall comply with such instructions. Confirmation in writing of such oral instruction given by the Engineer, whether before or after carrying out of the instructions shall be deemed to be instructions within the meaning of this sub-clause.

The Contractor shall also be bound to carry out any instructions issued by Client as confirmed in writing by the Engineer.

All certificates, notices, written orders or letters, to be given by the Employer or the Engineer to the Contractor, shall be deemed to have been served, if the same are delivered to the Contractor or his authorized representative, or delivered or left at or posted by speed post/ registered post to the given address of the Contractor or Contractor's registered office or principal place of business and essentially delivering the same by e-mail to the Engineer duly attached with scanned copy of such certificates, notices, written orders or letters and Proof of Dispatch (POD) with a copy to Employer on nominated e-mail address. Such documents shall be deemed to have been received on the day they are left or delivered, or in the case of postal transmission, on the day they would ordinarily have reached but not exceeding 7 days from the date of posting inclusive of day of posting, in any case.

The contractor shall furnish his postal address/ registered office address and e-mail address for communication.

Notices to Employer and Engineer

All notices or letters to be given by the contractor to the Employer or to the Engineer, under the terms of the contract, shall be served by sending by Speed/Registered post or by delivering the same, to the respective nominated addresses and essentially delivering the same by e-mail to the Engineer duly attached with scanned copy of such notice (s) or letters and Proof of Dispatch (POD) with a copy to Employer on nominated e-mail address..

Change of Address

Either party may change the nominated address by prior written notice to the other party. However, either party shall not change their e-mail address during currency of the contract without obtaining prior obtaining mutual consent for doing so.

Change in constitution of Firm

In case of any change in the constitution of Contractor's firm, the same shall forthwith be notified by the Contractor to the Engineer and the Employer.

11) DUTIES OF ENGINEER AND ENGINEER'S REPRESENTATIVE

Duties and Authority of Engineer

The Engineer shall carryout the duties specified or implied in the Contract including issue of instructions, decisions, certificates and orders, as are specified in the contract, or necessary for the observance/administration of the Contract and expeditious and timely completion of the work.

Duties and authority of Engineer's Representative

The Engineer's Representative shall be responsible to the Engineer. His duties are to supervise the work and to test and examine any materials to be used or workmanship employed in connection with the works. He can issue day to day instructions to the Contractor in Site Order

Book, which should be noted and complied by the Contractor. He shall have no authority to relieve the Contractor of any of his duties or obligations under the Contract, nor except as expressly provided hereunder or elsewhere in the Contract, to order any work involving delay or any extra payment by the Employer, nor to make any variation of or in the works. He is authorised to measure the works for the purpose of payment.

12) GENERAL OBLIGATIONS OF THE CONTRACTOR

General Responsibility of the Contractor

The Contractor shall comply with the provisions of the Contract with due care and diligence design (to the extent provided for in the Contract), execute, complete and maintain the works and remedy the defects in accordance with the provisions of the Contract. The Contractor shall provide all superintendence, labour, materials, plant, & Equipment and all other things, whether of a temporary or permanent nature, required in and for such design, execution, completion and maintenance of works and rectification of any defects, as directed by the Engineer or his Representative.

Site Operations and Methods of Construction:

The Contractor shall take full responsibility for the adequacy, stability and safety of all site operations and method of construction. Provided that the Contractor shall not be responsible for the design and specifications of Permanent works or for the design or specifications of any temporary works provided by the Engineer. Where the Contract expressly provides that part of the Permanent Works shall be designed by the Contractor, he shall be fully responsible for that part of such works, notwithstanding any approval by the Engineer.

Appraisal of Errors / Omissions in the Drawings:

The Contractor shall promptly inform in writing to the Engineer of any error, omission, fault and other defects, in the design, drawings or specifications for the works which are noticed while reviewing the Contract documents or in the process of execution of the works.

Compliance with Regulations and Bye-laws:

The Contractor shall comply with the statutory provisions relating to the works, regulations and by-laws of any local authority and undertaking, including those controlling the utilities such as water supply, sewerage, telephones, power supply, etc., in whose jurisdiction the work is to be executed. The Contractor shall be bound to give all notices required by statute, regulations or bye-laws, as aforesaid. It shall be the responsibility of the Contractor to arrange all necessary clearances and approvals from the concerned authorities or undertakings before the work is taken up. However, assistance, if any, may be provided by Engineer/Employer/Client.

Contract Agreement:

The Contractor shall enter into and execute the Contract Agreement in the form of agreement (Annexure-I) within 28 days from the date of issue of Letter of Acceptance. The stamp papers of the requisite value as per the prevailing laws shall be provided by the Contractor at his own cost. Original agreement shall be retained by the Employer/Engineer and a certified copy shall be made available to the Contractor.

Contractor's Representative

When the Contractor is not in a position to be present, he shall keep responsible representative at site or work place during all working hours, who shall, on receiving a reasonable notice, present himself to the Engineer, Engineer's Representative or their Assistants. The instructions and orders given to the Contractor's representative shall be deemed to have the same force as if they have been given to the Contractor. The Contractor should furnish the necessary Power of Attorney in favour of his representative for the purpose of this clause. Failure on part of the Contractor to comply with this provision shall constitute a breach of Contract and may lead to action under clause 50.0.

13) SUBCONTRACTING

The Contractor shall not subcontract the whole of the works. Except where otherwise provided in the Contract, the Contractor shall not subcontract any part of the works without the prior consent of the Engineer in writing. Any such consent shall not relieve the Contractor from any of his liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any subcontractor, his representative, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor.

Provided that the Contractor shall not be required to obtain such consent for

The provision of labour, or

The purchase of materials which are in accordance with the specifications/standards specified in the Contract, or

The subcontracting of any part of the works for which the subcontractor is named in the contract.

The purchase of Plants and Equipment for execution of the works.

The hiring of Plants and Equipment for execution of the works.

Any breach of the above conditions shall entitle the Employer/Engineer to rescind the contract.

Provided always that execution of specific works by petty contractors, or on piecework basis, under the personal supervision of the Contractor, shall not be deemed to be subcontracting under this clause.

14) PROVISIONS OF EFFICIENT AND COMPETENT STAFF

The Contractor shall employ and keep on the works at all times efficient and competent staff to give necessary directives to his workers to see that they execute works in a safe and proper manner. The Contractor shall employ only such supervisors and workmen as are capable, careful, and skilled. The Engineer shall be at liberty to object to and order the Contractor to remove forthwith from the works, any person employed by the Contractor in or about the execution of works or maintenance of works, who, in the opinion of the Engineer, misconducts himself or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by the Engineer to be undesirable and such person shall not be employed

again in the works without the written permission of the Engineer. Any person so removed from the works shall be replaced as soon as possible by a competent substitute.

15) PROGRAMME OF WORK

The Contractor shall submit the programme for completion of work to the Engineer for his approval within 15 days from the date of receipt of letter of acceptance. Unless otherwise directed, the programme shall be in the form of Bar-Chart showing proposed execution of quantities of principal items of work. The programme shall be related to the capability of equipment proposed to be deployed and site conditions. The Contractor shall also provide in writing methodology for execution of major items of work as desired by the Engineer. The submission and approval of such programme shall not relieve the Contractor of any of his duties or responsibilities or obligations under the contract. The Engineer shall have full power and authority during the progress of work, to issue such instructions as may be necessary for the proper and adequate execution of the work.

16) COMMENCEMENT OF WORK

The Contractor shall commence the works within the time limit as specified in the Letter of Acceptance.

17) ACCESS TO SITE OF WORK

Access to Engineer

The Engineer or the Engineer's Representative, shall at all times have access to the works and to all workshops and places, where work is being performed and from where materials, manufactured articles or machinery are being obtained for the works, and the Contractor shall afford every facility and every assistance in obtaining the right to such access.

Access Road

The Contractor shall provide necessary access roads to the site of work, from the nearest public thoroughfare/right of way, at his own cost, unless otherwise provided for in the contract.

18) SETTING OUT

The Contractor shall be responsible for the true and proper setting out of the works using his own survey instruments, appliances and labour. If at any time during the progress of works, any error appears or arises in any part of the work, the Contractor on being required to do so by the Engineer, shall at once rectify such error, to the satisfaction of the Engineer. The Contractor shall also provide all necessary assistance in the form of labour and materials to Engineer or his representatives for checking the set out with his own instruments. The checking of any setting out, or of any line or level by the Engineer's representative shall not in any way relieve the Contractor of his responsibility for the correctness thereof. The Contractor shall carefully protect and preserve all bench marks, reference pillars, pegs, and other things used in setting out the works.

19) TEMPORARY WORKS

All temporary works necessary for the proper execution of the works shall be provided and maintained by the Contractor at his own cost. All detailed working drawings, design, design calculations and fabrication drawings for important temporary works as decided by the Engineer, shall be prepared by the Contractor at his own cost and forwarded to the Engineer at least 30 days in advance of actual constructional requirements for his approval. Such approval shall not, however, relieve the Contractor of any of his responsibility in connection with the temporary works.

When the temporary works are no longer required, the Contractor shall remove the same at his own cost. In the event of failure on the part of the Contractor to remove the temporary works, the Engineer will cause them to be removed and cost incurred for removal, supervision, and other incidental charges shall be recovered from the Contractor.

20) SPECIFICATIONS AND DRAWINGS

The Contractor shall keep at site in good condition one copy of latest approved Specifications and Drawings and also such other Contract documents as may be necessary and make them available to the Client/Employer/Engineer or his Representative at all reasonable times. Any specification & drawing shall not be used on any other work or communicated to a third party by the Contractor.

Adherence to Specifications and Drawings

The work shall be executed in perfect conformity with the specifications and drawings of the Contract issued to the Contractor by the Engineer from time to time. If the Contractor does any work or part of work in a manner contrary to the specifications or drawings without the approval of the Engineer, he shall bear all the costs arising there from including dismantling and reconstruction strictly in accordance with the specifications and drawings and shall be responsible for all the losses/delays to the Employer/Engineer. The term drawings in this sub-clause also include the drawings prepared by the Contractor and approved by the Engineer.

Meaning & Intent of Specifications and Drawings

If any ambiguity arises as to the meaning and intent of any portion of the specifications and drawings or as to execution or quality of any work or material or as to the measurement of the works, the decision of the Engineer thereon shall be final and binding.

21) INDEMNITY BY THE CONTRACTOR

21.1 Indemnity against all actions of Contractor

The Contractor shall hold and save harmless and indemnify the Client/Employer/Engineer and their employees, from all actions, suits, proceedings, loss, costs, damages, charges, claims and demands of every nature and description brought against or recovered from the Client/Employer/Engineer and their employees by reason of any act or omission of the Contractor and/or his representative and/or his Employees and/or his sub-contractors in the execution of the works or in the guarding of the same. All the sums payable by Client/Employer/Engineer by way of compensation under any of these conditions, shall be

recovered from the dues of the Contractor, without reference to the actual loss or damage sustained, and whether or not any damage shall have been sustained.

Indemnity against all Claims of Patent rights and Royalties

The Contractor shall hold and save harmless and indemnify the Client/Employer/Engineer, his officers and Employees from and against all claims and proceedings for or on account of infringement by the Contractor of copyright, any patent rights, design, trademark or name, secret process, patented or unpatented invention, articles or appliances manufactured or used for or in connection with the works and from and against all claims, proceedings, costs, damages, charges, and expenses whatsoever in respect thereof or in relation thereto. The Contractor shall pay all royalties, taxes, rent and other payments or compensation, if any, for getting the materials required for the works and due fulfilment of the contract and indemnify Client/Employer/Engineer against any claims in this regard.

22) DAMAGE TO LIFE AND PROPERTY:

The Contractor shall be responsible for all risks to works, nearby existing structures and life of his supervisors and workmen as also those of Employer/Client or any trespassers from whatever cause in connection with the works until these are taken over by Client/ Employer/ Engineer. The Contractor shall make good at his own expenses all loss or damages to life and property.

23) SAFETY OF PUBLIC AND PUBLIC UTILITIES

- i)** Existing road or water courses or any other utility shall not be blocked, cut through, altered, diverted or obstructed in any way by the Contractor, except with the permission of the Engineer. All compensation claimed by any Department/Organisation for any unauthorized closure, cutting through, alteration, diversion or obstruction to such roads or water courses by the Contractor or his staff shall be recovered from any moneys due to the Contractor.
- ii)** During progress of work in any street or thoroughfare, the Contractor shall make adequate provision for the passage of traffic, for securing safe access to all premises approached from such street or thoroughfare and for any drainage. Water supply, sewer lines, Electrical and Telecommunication cables/wires etc. which may be interrupted by reason of execution of works shall be protected/diverted and maintained by the Contractor at his own cost. Barriers, lights and other safeguards as prescribed by the Engineer for the regulation of traffic including watchmen necessary to prevent accidents shall be provided by the Contractor at his own cost.
- iii)** The Contractor shall be responsible for taking all precautions to ensure safety of the public utilities and public in the vicinity of works and shall post such watchmen at his own cost as may, in the opinion of the Engineer, be necessary to comply with the regulations applying to the work and to ensure safety.
- iv)** Should the Contractor fail to implement the provisions as required in the above sub-clauses, the Engineer may provide necessary arrangements and the cost of the same shall be recovered from the Contractor's payments/dues.

24) OTHER SAFETY PROVISIONS

24.1 Safety of Labour and others

The Contractor shall, at his own expense, arrange for the safety provisions as required by any law in force, in respect of the labour employed directly or indirectly for performance of the works, and shall provide all facilities in connection therewith.

24.2 Safety of works

The Contractor shall provide and maintain at his own cost, all lights, guards, signage, signalmen, fencing and watching arrangements when and where necessary, or as required by the Engineer for the protection of the works or for safety and convenience of those employed on works or of the public.

24.3 Mere observance of these precautions shall not absolve the Contractor of his liability in case of loss or damage to property, or injury to or death of any employee/labour of Contractor, Client or Employer/Engineer or any member of the public.

24.4 Recovery of the cost from the Contractor

Should the Contractor fail to implement the provisions as required in the preceding sub-clauses 24.1& 24.2, the Engineer may provide necessary arrangements and the cost of the same shall be recovered from the Contractor's payments/dues.

25) PROTECTION OF ENVIRONMENT

During execution of works, the Contractor and his sub-contractors, petty contractors shall abide at all times by all existing enactments on environmental protections and rules made thereunder, regulations, notifications and bye-laws of the State or Central Government or local authorities and any other law, bye-law, regulation that may be issued in this respect in future by the State or Central Government or local authority. Salient features of some of the laws that are applicable are given below:-

- i)** The Water (Prevention and Control of Pollution) Act, 1974: This provides for the prevention and control of water pollution and maintaining and restoring of wholesomeness of water. "Pollution" means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.
- ii)** The Air (Prevention and Control of Pollution) Act, 1981: This provides for prevention, control and abatement of air pollution. "Air Pollution" means the presence in the atmosphere of any "air pollutant", which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

- iii) The Environment (Protection) Act, 1986: This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. Environment includes water, air and land and the inter-relationship which exists among and between water, air and land, other living creatures, plants, micro-organism and property.
- iv) The Public Liability Insurance Act, 1991: This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act, 1986, and exceeding such quantity as may be specified by notification by the Central Government.

26) CARE OF WORKS

From the commencement of the work until completion, acceptance and final takeover of the works by the Engineer, the Contractor shall take full responsibility for the care of all works including temporary works. In case any damage, loss or injury happens to the work or to any temporary works from any cause whatsoever, the Contractor shall at his own cost repair and make good the same so that on completion and at the time of final take over, the work shall be in good condition and in conformity in every respect with the requirements of the contract and the Engineer's instructions.

27) USE OF EXPLOSIVES

Explosives shall not be used on the works or site by the Contractor without the written permission of the Engineer and only in the manner and to the extent such permission is given. When explosives are required for works they shall be stored in a special magazine, to be provided by the Contractor at his own cost, in accordance with the provisions of law on Explosives. The Contractor shall take all precautions in using the explosives and prevent damage to nearby properties and utilities. The Contractor shall also obtain necessary license for the storage and the use of explosives from the concerned authorities. All operations in which or for which explosives are used shall be at the risk and responsibility of the Contractor and the Contractor shall indemnify the Client/Employer/ Engineer and their employees in respect thereof.

28) OCCUPATION AND USE OF LAND

No land belonging to or in the possession of the Client/Employer/Engineer shall be occupied by the Contractor without written permission of the Engineer. The Contractor shall not use, or allow the site to be used for any purpose other than that of executing the works.

29) EXCAVATED MATERIALS

The Contractor shall not use, sell or otherwise dispose off, or remove, except for the purpose of this Contract sand, clay, ballast, earth, rock or any other substance or materials, which may be obtained from any excavation made. All such items shall be the property of the Client. The Contractor may be permitted by the Engineer to use the same for the purpose of works on mutually agreed payment terms.

30) RELICS AND TREASURES

All gold, silver, coins, oil and other minerals of any description, and precious stones of all kinds, treasures, antiques, fossils and other similar things, which shall be found in or at site, shall be the property of the Client and the Contractor shall duly preserve the same to the satisfaction of the Engineer, and from time to time deliver the same to such person or persons, as the Client/Engineer may appoint to receive the same.

31) CO-OPERATION WITH OTHER CONTRACTORS

The Contractor shall in accordance with the requirements of the Engineer, cooperate with and afford all reasonable opportunities for carrying out the work by other Contractors engaged by the Client/Employer/Engineer or any other Authority.

32) WORK DURING NIGHT

Unless specifically provided elsewhere in the Contract, the Contractor shall not carry out any work between sunset and sunrise without the prior permission of the Engineer. In case of any grave emergency or in order to avoid risk to property and life or to prevent damage to utilities or to restore them, work may be done at night also without the prior permission of the Engineer, but intimation to this effect should be sent to him immediately. No increase in rates or extra payment shall be admissible for the night work. The Contractor shall make adequate lighting and safety arrangements for night working. He shall also be responsible for any claim on account of any injury to or loss of life, of any one, arising out of inadequate lighting, safety arrangements or due to any other failure of the Contractor.

33) SHEDS, STORES, YARDS

The Contractor shall at his own expense provide and maintain sheds, store-houses and yards at such locations and in such numbers as in the opinion of the Engineer are necessary for carrying out the works. The Engineer and the Engineer's representatives shall have free access to the said sheds, storehouses and yards at any time for the purpose of inspecting the stock of materials and plant so kept in hand. Any materials or plant which the Engineer may object to shall not be brought upon or used in the works and shall forthwith be removed from the sheds, storehouses or yards by the Contractor.

34) ENGINEER'S MATERIALS

34.1 Materials to be supplied by the Engineer

After the acceptance of tender, the Contractor shall make request in writing to the Engineer for the materials to be supplied by the Engineer, if any, in accordance with the approved programme for execution of works.

34.2 Cost to be borne by Contractor

The materials shall be issued to the Contractor at the Engineer's depots or near the project site. The Contractor shall bear the cost of loading, transporting to site, unloading, storing safely under cover, as required.

34.3 Return of surplus materials

All surplus materials issued to the Contractor by the Engineer for use, incorporation or fixing in the works (including preparatory works, if any) shall, on completion of or before closure of works, be returned by the Contractor at his expense. However, the materials considered unserviceable by the Engineer shall not be taken back.

34.4 Credit for returned materials

Surplus materials returned by the Contractor in acceptable condition to the Engineer shall be credited to the Contractor by the Engineer.

34.5 Accountable of the materials issued by the Engineer including recovery etc. shall be in accordance with the Special Conditions of Contract.

35) TOOLS, PLANT AND EQUIPMENT

Except for any specific item mentioned in the contract, the Contractor shall have to make his own arrangements, at his own cost, Plant, Machinery and Equipment required for execution and completion of all works to the entire satisfaction of the Engineer. This shall also include all other associated equipment, tools/tackles, spare parts, POL, consumables, stores, manpower as required for the execution of works.

36) PLANT AND MATERIALS OF THE CONTRACTOR

36.1 Contractor's plant/materials at site to be exclusive to the work

All constructional plant and materials brought on the site by the Contractor be deemed to be exclusively intended for the execution of the work or part of the work and the Contractor shall not remove the same without the permission of the Engineer till completion of work or part of work.

36.2 Removal of constructional plant/materials from site

Upon completion of the works, the Contractor shall remove from the site all the said constructional plant remaining thereon and unused materials belonging to the Contractor.

36.3 Loss or damage to constructional plant/materials

The Employer/Engineer shall not at any time be liable for the loss of or damage to any of the said constructional plant, temporary works or materials.

36.4 Assistance to Contractor for re-export of plant

In respect of any constructional plant which the Contractor shall have imported for the purposes of the works, the Employer/Engineer may assist the Contractor, where required in procuring any necessary government consent for re-export of such constructional plant by the Contractor after the completion of the works.

36.5 Assistance to Contractor for customs clearance

The Employer/Engineer may assist the Contractor, where required, in obtaining clearance through the customs of constructional plant, material and other things required for the works. This shall not dilute in any way the Contractors' obligations and responsibilities under the contract.

37) CONTRACTOR TO KEEP SITE CLEAR

During the progress of works, the Contractor shall keep the site reasonably clean and free from obstructions and shall store neatly construction plant and materials.

38) HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS

No quarters shall be provided by the Employer/Engineer for the accommodation of Contractor or any of his staff employed on works.

Provision of labour Camp

The Contractor, shall, at his own expense, make adequate arrangements for the housing, supply of drinking water, electricity, canteen and provision of latrines and urinals, for his staff and workmen employed on the work, directly or through petty Contractors or sub-Contractors and for temporary crèche (Bal-mandir) where 50 or more women are employed at a time. All camp sites shall be maintained in clean and good sanitary conditions, by the Contractor, at his own cost.

Compliance with Rules for employment of labour

The Contractor shall comply with all laws, bye-laws, rules and regulations in force, pertaining to employment of local or imported labour, and shall take all necessary precautions to ensure and preserve the health and safety of all staff/workmen, employed on the works directly or through petty Contractors or sub-Contractors.

Medical facilities at site

The Contractor shall, at his own cost, provide first aid and medical facilities at site as may be prescribed by the Engineer.

Use of Intoxicants

No sale of alcoholic drinks and/or intoxicating drinks or drugs shall be permitted by the Contractor at or near the site. The Contractor shall also ensure that no labour or employee is permitted to work at the site in an intoxicated state or under the influence of any drugs or drinks.

39) ENGAGEMENT OF LABOUR

The Contractor shall make his own arrangements for the engagement of all labour, except as provided otherwise in the contract.

The Contractor shall not employ any labour below the age prescribed in any labour legislation, directly or through petty Contractors or sub-Contractors, for execution of the work.

40) WAGES OF LABOUR

40.1 Wages under relevant laws

In dealing with labour and employees, the Contractor and his subcontractors (including piece rate and petty Contractors) shall comply fully with all laws and statutory regulations such as -

Workmen's Compensation Act, 1923

Payment of Gratuity Act, 1972

Employees Provident Funds and Miscellaneous Provisions Act, 1952

Maternity Benefits Act, 1951

Contract Labour (Regulations and Abolition) Act, 1970

Minimum Wages Act 1948

Payment of Wages Act 1936

Equal Remuneration Act 1979

Payment of Bonus Act 1965

Industrial Dispute Act 1947

Industrial Employment (Standing Orders) Act 1946

Trade Union Act 1926

Child Labour (Prohibition and Regulation) Act 1986 Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act 1979

The Buildings and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 and Cess Act of 1996. The Factories Act 1948.

and other laws or Regulations framed by competent legislative authorities from time to time as may be applicable. In accordance with the various Acts and Regulations with all upto date amendments, the Contractor shall ensure that he and his subcontractors (including petty and piece rate Contractors) observe strictly inter-alia the following:

Wages paid are not less than those prescribed.

Wages and other dues are paid regularly and in time.

Liens/licenses are obtained as required under any of the acts or regulations.

Maintain prescribed records, submit necessary statements to authorities concerned and display required notices.

Take prompt action on any instructions / directions from the authorities under various labour laws.

40.2 Claims on account of violation of labour laws

If any moneys shall as a result of any instructions, directions or decisions from the authorities or claim or application made under any of the labour laws or regulations be directed to be paid by the Engineer because of any failure of the Contractor, such moneys shall be deemed to be

moneys payable to the Engineer by the Contractor and on failure of the Contractor to repay the Engineer any moneys paid or to be paid as aforesaid within seven days after the same shall have been demanded, the Engineer shall be entitled to recover the amount from any moneys due or becoming due to the Contractor under this or any other contract with the Employer. The Engineer shall not be bound to contest any such claim or demand unless the Contractor makes a written request for it, and Contractor's reasons for contesting are considered reasonable by the Engineer and the Contractor deposits the full cost that the Engineer may have to incur in contesting the case.

41) REPORTING OF ACCIDENTS INVOLVING LABOUR

The Contractor shall be responsible for safety of all employees/labour employed by him on works, directly or through petty Contractors or sub-Contractors and shall report accidents, occurring on works to the Engineer or the Engineer's representative, and shall make every arrangement to render all possible assistance and to provide prompt and proper medical attention. In case of fatal accident, it will be Contractor's responsibility to report accident to police keeping the Engineer advised of the same. The compensation for affected workers or their relatives shall be paid by the Contractor in such cases with utmost expedition in accordance with the Workmen's Compensation Act.

42) SUPPLY OF WATER AND ELECTRIC POWER

Unless otherwise provided elsewhere in the Contract, the Contractor shall be responsible for making arrangements at his own cost to obtain supply of water and/or electrical power, necessary for execution of the works and during defect liability period. In the event the Engineer is in a position to supply water or electrical power, or both, required for works, such supply shall be given only at one point. The cost of making necessary arrangements to the Engineer's distribution system and laying of necessary pipe line, specials, valves, meters etc. for water supply or the laying of underground/overhead conductor, circuit protection, electric power meters and transmission structures in case of electric power shall be borne by the Contractor. The Contractor shall also bear the running cost of water and power supplied, the rates for which shall be determined and notified by the Engineer. The decision of the Engineer on such cost shall be final and binding. Any increase in water/power tariff by supplying agencies shall also be borne by the Contractor.

43) REPAIR TO DAMAGES

The Contractor shall be responsible for rebuilding/repairs of any damage by any reasons not attributable to the design defect (where design is supplied by Engineer/Client) during execution of works or Defect Liability Period. In case the Contractor is unable or unwilling to execute such repair works promptly, the Engineer may get the same done by engaging another agency or using labour, materials and resources as may be considered necessary and the cost of such remedial works shall be recovered from the Contractor's dues. The decision of the Engineer regarding reasons of the damage shall be final and binding.

44) IMPLEMENTATION OF QUALITY, SAFETY, HEALTH AND ENVIRONMENT MANAGEMENT SYSTEM

Contractor shall provide and ensure the use of safety gadgets like Safety- shoes, helmets, gloves, jackets, mask etc. as required for all workers and staff. The Contractor shall provide and erect safety barricades as required, display safety posters and instructions regarding safety.

The Contractor shall prepare a Project Safety Manual and get it approved by the Project Head. The Contractor will own the ultimate responsibility of all aspects of Safety, Health and Environmental upkeep of the work place and its surroundings.

The Contractor will facilitate safety checks and checks on compliance to all the norms as per the Project Safety Manual by PH or the nominated Safety Officer at regular interval.

The Employer may, at their discretion undertake such corrective measures as deemed fit for immediate restoration of safe conditions at the work place at the cost of the Contractor and recover the cost from Contractor's running bills. The contractor will keep the Employer indemnified against any corrective action by the Employer. In addition to such recourse, the penalty for each violation will be enforced as under, without issuing any show cause notice for the same:-

S. N.	Nature of Violation	Penalty
1.0	Non preparation of Site Safety Plan before the first running bill.	Rs. 10,000/-
2.0	Violation of safety norms pointed out by inspecting officials, such as deficient documentations or safety gadgets or lack of supervision/ process control etc.	Rs.10,000/- for each violation subject to maximum 1%of the contract value in all.
3.0	Injury to worker leading to stoppage of work	Rs. 25,000/- for each case
4.0	Fatalities to workers at work related accidents	Rs. 5.0 Lakh for each mortality
5.0	Repetition of violation	May lead to termination of work

The Contractor shall arrange timely calibration of all his measuring and testing equipment at his own cost from reputed laboratory and supply of calibration certificates to the Engineer.

The Contractor shall ensure maintenance and overhauling of all his plant and machinery as per guidelines issued by manufacturer/ vendor/ Engineer.

The Contractor shall arrange to provide test certificates issued by manufacturers of materials supplied by him and also arrange the testing of materials from approved laboratory at his own cost, as required and supply test certificates to the Engineer.

The Contractor shall provide work instructions/ check lists for proper execution of work. The Contractor shall also maintain all relevant records and documents properly and same shall be made available to the Engineer as required.

45) MATERIALS AND WORKMANSHIP

45.1 Material and workmanship as per Specifications

- i.** All materials and workmanship shall be as per the contract and in accordance with the Engineer's instructions and shall be subjected to such tests as the Engineer may direct. The Contractor shall provide all such assistance, instruments, machines, labour and materials required for examining, measuring and testing any work and materials used. The Contractor shall supply samples of material before incorporating in the works for testing as may be selected and required by the Engineer.
- ii.** The sources of materials to be used in the works shall be intimated to the Engineer and are subject to his approval.

45.2 Supply of sample

All samples shall be supplied by the Contractor at his own cost.

45.3 Cost of tests of Materials and Workmanship

The cost of carrying out any tests in a reputed laboratory as acceptable to the Engineer shall be borne by the Contractor except for the materials to be supplied by the Engineer.

46) REMOVAL OF IMPROPER MATERIALS AND WORKS

- i.** The Engineer shall have the authority to order in writing from time to time:

The removal from site within specified time, of any material, which in the opinion of the Engineer, is not in accordance with the Specifications and Conditions of the Contract.

The substitution of defective material by approved quality material; and

The removal and proper re-execution, notwithstanding any previous decision or interim payment thereof, of any work which in respect of materials or workmanship is not, in the opinion of the Engineer, in accordance with the contract.

In case of default on the part of the Contractor in carrying out such order, the Engineer shall be entitled to get the same done by engaging another agency or by deploying labour, materials and other resources. All such cost shall be recovered from the Contractor's dues.

47) EXAMINATION OF WORK BEFORE COVERING UP

No work or part of work shall be covered up or put out of view, without the prior approval of the Engineer or the Engineer's representative. If any work shall be covered up or put beyond the reach of inspection/measurement without the prior approval of the Engineer or Engineer's representative, the same shall be uncovered by the Contractor at his own cost.

48) SUSPENSION OF WORKS ORDERED BY THE ENGINEER

The Contractor shall, on the order of the Engineer, suspend the works or any part thereof, for such time, and in such manner, as the Engineer may consider necessary, and shall during such suspension, properly protect and secure the works so far as it is necessary in the opinion of the Engineer.

The Contractor shall not be entitled to extra cost, if any, incurred by him during such suspension if such suspension is on account of weather conditions or requirement for execution of works or provided for in the Contract or for less than 30 days at a time for any other reason. The Contractor shall, however, be entitled for extension of time for completion of work as the Engineer may consider proper having regard to the period of suspension. However, if the suspension is ordered by the Engineer due to any default of the Contractor such as defective materials, workmanship etc., the Contractor shall not be entitled to any extension or extra cost incurred.

49) DELAY AND EXTENSION OF CONTRACT PERIOD

The time allowed for execution and completion of the works or part of the works as specified in the contract, shall be essence of the contract on the part of the Contractor.

As soon as it becomes apparent to the Contractor, that the work and / or portions thereof (required to be completed earlier), cannot be completed within the period(s) stipulated in the contract, or the extended periods granted, he shall forthwith inform the Engineer and advise him of the reasons for the delay, as also the extra time required to complete the works and / or portions of work, together with justification thereof. In all such cases, whether the delay is attributable to the Contractor or not, the Contractor shall be bound to apply for extension well within the period of completion/extended period of completion of the whole works and / or portions thereof.

Extension due to modifications

If any modifications are ordered by the Engineer or site conditions actually encountered are such, that in the opinion of the Engineer the magnitude of the work has increased materially, then such extension of the stipulated date of completion may be granted, as shall appear to the Engineer to be reasonable.

Delays not due to Employer/Contractor.

If the completion of the whole works (or part thereof which as per the contract is required to be completed earlier), is likely to be delayed on account of:

Any force majeure event referred to in Clause 71.0 or

Delay on the part of other Contractors engaged directly by the Client/Employer, on whose progress the performance of the Contractor necessarily depends or any relevant order of court or

Any other event or occurrence which, according to the Engineer is not due to the Contractor's failure or fault, and is beyond his control;

The Engineer may grant such extensions of the completion period as in his opinion is reasonable.

49.5 Delays due to Employer/Engineer.

In the event of any failure or delay by the Employer/Engineer in fulfilling his obligations under the contract, then such failure or delay, shall in no way affect or vitiate the contract or alter the character thereof; or entitle the Contractor to damages or compensation thereof but in any such case, the Engineer shall grant such extension or extensions of time to complete the work, as in his opinion is / are reasonable.

49.6 Delays due to Contractor and Liquidated Damages:

If the delay in the completion of the whole works or a part of the works, beyond stipulated completion period, is due to the Contractor's failure or fault, and the Engineer feels that the remaining works or the portion of works can be completed by the Contractor in a reasonable and acceptable short time, then, the Engineer may allow the Contractor extension or further extension of time, for completion, as he may decide, subject to the following:

Without prejudice to any other right or remedy available to the Engineer, recover by way of liquidated damages and not as penalty, a sum equivalent to quarter of one percent (0.25%) of the contract value of the works, for each week or part of a week the Contractor is in default.

If the delay relates only to a portion of the works with a separate and earlier completion period, the contract value shall be restricted to the cost of that portion of the works only.

The recovery on account of compensation for delay shall be limited to 5% of the contract value of the works, or the portion of the works, as the case may be.

The recovery of such damages shall not relieve the Contractor from his obligation to complete the work or from any other obligation and liability under the contract.

49.7 Engineer's decision on compensation payable being final

The decision of the Engineer as to the compensation, if any, payable by the Contractor under this clause shall be final and binding.

49.8 Time to continue to be treated as the essence of contract in spite of extension of time.

It is an agreed term of the contract that notwithstanding grant of extension of time under any of the sub-clauses mentioned herein, time shall continue to be treated as the essence of contract on the part of the Contractor.

50) DETERMINATION OF CONTRACT DUE TO CONTRACTOR'S DEFAULT

Conditions leading to determination of contract

If the Contractor

- a. becomes bankrupt or insolvent, or,
- b. makes arrangements with or assignment in favour of his creditor, or agrees to carry out the contract under a committee of inspection of his creditors or
- c. being a company or corporation goes into liquidation by a resolution passed by the Board of Directors/ General Body of the share-holders or as a result of court order (other than voluntary liquidation for the purpose of amalgamation or reconstruction) ; or
- d. has execution levied on his goods or property or the works, or
- e. assigns or sublets the contract or any part thereof otherwise than as provided for under conditions of this contract, or
- f. abandons the contract, or
- g. persistently disregards instructions of the Engineer or contravenes any provisions of the contract, or
- h. fails to adhere to the agreed programme of work or fails to complete the works or parts of the works within the stipulated or extended period of completion, or is unlikely to complete the whole work or part thereof within time because of poor record of progress; or
- i. fails to remove materials from the site, or pull down and replace work, after receiving notice from the Engineer to the effect that the said materials or works have been condemned or rejected, or
- i fails to take steps to employ competent and/ or additional staff and labour, or
- j. fails to afford the Engineer or his representative proper facilities for inspecting the works or any part thereof,
or
promises, offers or gives any bribe, commission, gift or advantage, either himself or through his partners, agents or servants to any officer or employee of the Engineer or the Employer, or to any person on their behalf, in relation to obtaining or execution of this or any other contract with the Employer, or
- l. suppresses or gives wrong information while submitting the tender.

In any such case the Engineer on behalf of the Employer may serve the Contractor with a notice in writing to that effect and if the Contractor does not, within 7 days after delivery to him of such notice, proceed to make good his default in so far as the same is capable of being made good, and carry on the work or comply with such instructions as aforesaid to the entire satisfaction of the Engineer, the Employer shall be entitled after giving 48 hours notice in writing to terminate the contract, as a whole in terms of sub-clause no. 8.4(b) and 8.4(c).

- ii. In such a case of termination, the Employer/Engineer may adopt the following courses

- a) Take possession of the site and any materials, constructional plants, equipment, stores, etc.
- b) Measure up the balance work from which the Contractor has been removed, and get it completed by another Contractor. The manner and method, in which such work is to be completed, shall be entirely at the discretion of the Engineer whose decision shall be final and binding.
- c) Carry out the balance work from which the Contractor has been removed, by the employment of the required labour, materials, plants and equipment and other resources.

Entitlement of Employer/Engineer:

In cases described in sub-clause 50.1 (ii) above, the Employer/Engineer shall be entitled to forfeit the Security Deposit and encash the Performance Security amount as a whole in terms of sub-clause no.: 8.4.

51) DETERMINATION OF CONTRACT ON EMPLOYER/ENGINEER'S ACCOUNT:

The Employer/Engineer shall be entitled to determine the contract, at any time, should, in the Employer/Engineer's opinion, the cessation of works becomes necessary, owing to paucity of funds or due to court orders or from any other cause whatsoever. Notice in writing from the Employer/Engineer of such termination and reasons therefore, shall be conclusive evidence thereof. In such a case, the value of approved materials actually brought to the site and of work done upto date by the Contractor, shall be paid for in full by the Employer/Engineer, at rates specified in the contract. If rates for any materials or items of work are not available in the contract, these shall be fixed by the Engineer in terms of clause 59.0.

In case of determination of contract on Employer/Engineer's account as described above, the claims of the Contractor towards expenditure incurred by him in the expectation of completing the whole works, shall be admitted and considered for payment as deemed reasonable and are supported by the documents/vouchers etc. to the satisfaction of Employer/Engineer. The decision of the Employer/Engineer on the necessity and propriety of such expenditure shall be final and conclusive.

However, the Contractor shall have no claim to any payment of compensation or otherwise, on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not in consequence of determination of contract under this clause.

Plant, Equipment and tools as well as unutilized materials supplied by the Employer / Engineer to the Contractor shall be returned in acceptable conditions at Engineer's depot at Contractor's cost. The Engineer shall be entitled to recover the cost of unreturned Plant, Equipment and tools as well as unaccounted materials from the Contractor. The amount to be recovered from the Contractor shall be decided by the Engineer whose decision in this regard shall be final and binding. The Contractor shall have to pay back unrecovered portion of advances made to him, together with accrued interest there on. In case, the Contractor defaults, the Engineer shall recover the amounts from any payment due to the Contractor, or from the Performance Security

or by encashing the Bank Guarantees given by the Contractor for securing the advances or for any other purpose. This is without prejudice to other remedies available to the Employer/Engineer.

52) DEATH OF CONTRACTOR/ PARTNER

If the Contractor is an individual or a sole proprietary concern, and the individual or a sole proprietor dies, or if the Contractor is a partnership concern and one of the partners dies, in that case, unless the Employer/Engineer is satisfied that the legal representative of the individual Contractor or of the sole proprietor, as the case may be, or in the case of partnership firm, all surviving partners are capable of carrying out and completing the contract, the Employer/Engineer shall be entitled to rescind the contract as to its incomplete part. In that event, the Employer/Engineer shall not be liable to pay any compensation to the legal heirs of the deceased Contractor and / or to the surviving partners of the Contractor's firm, on account of such cancellation of contract. The Engineer's decision as to whether the legal representatives of the deceased Contractor or surviving partners of the Contractor are capable of carrying on and completing the contract shall be final and binding on the parties. Provided further that the legal representatives of the deceased Contractor or the surviving partners shall also not be liable to pay any damages, alleged or actually suffered by the Employer/Engineer, in respect of incomplete part of the contract. Any liability incurred by the deceased Contractor, or by the deceased partner of the contracting firm, before his death, shall be recovered from the legal representatives of the deceased Contractor or from the surviving partners of the said contracting firm as the case may be.

53) EMPLOYMENT OF RETIRED OFFICERS / ENGINEER OF EMPLOYER / ENGINEER

No Officer/Engineer of the Employer is allowed to work as a Contractor or his employee for a period of two years after his retirement/resignation from the service of the Employer without the prior permission of the Employer.

54) MODIFICATION TO CONTRACT

In the event of any provisions of the contract requiring to be modified after the agreement has been signed, the modifications shall be made in writing and signed by the Employer/Engineer and the Contractor or his authorised representative. Such modifications will not be effective until the same have been signed by both the parties. Any verbal or written arrangements for abandoning, modifying extending, reducing or supplementing the contract, or any of the terms thereof shall be deemed to be provisional and shall not be binding on the Employer/Engineer unless and until the same are incorporated in a formal instrument and signed by the Employer/Engineer and the Contractor.

55) MODIFICATIONS TO WORK

The Engineer shall be competent to order in writing to enlarge or extend, diminish or reduce the works or make any alterations in their design, character, position, site, quantities, dimensions or in the method of execution or use of materials for the execution thereof and to any additional works to be done or any work not to be done.

The enlargement, extension, diminution, reduction, alterations or additions, referred to above shall in no way affect the validity of the contract, but shall be performed by the Contractor as

provided therein and be subject to the same conditions, stipulations, obligations and rates as if they had been originally and expressly included and provided for in the Bill of Quantities, specifications and drawings, and the amount to be paid thereof shall be calculated in accordance with accepted rates and other extra items of works at the rates, determined as per contract. However, the rates of quantities exceeding 25% of those provided in Bill of Quantities shall be finalised as per clause 58 of these conditions.

56) RATES FOR ITEMS OF WORK TO BE ALL INCLUSIVE

56.1 The rates entered in the accepted Bill of Quantities of the Contract, shall be all-inclusive and provide for works duly and properly completed in accordance with terms and conditions of the Contract and processes as mentioned in specifications and drawings (including revised drawings), relevant codes whether mentioned or not in the nomenclature of the item in Bill of Quantities. All rates quoted in the tender shall also deemed to include except specifically provided otherwise in the Contract:

All materials, labour, tools and plant, stores, centering, shuttering, etc.

Construction/Erection, maintenance and removal of all temporary works.

All watching, lighting, pumping and draining unless otherwise provided for.

- All barriers and arrangements for safety of the property, utilities, public or employees/workers during the execution of works.
- All sanitary and medical arrangements for labour camps.
- The setting out of all works of construction, repair and up-keep of all centre lines, benchmarks, reference pillars etc.
- Site clearance except specifically provided otherwise in the Contract.

56.2 Nothing extra shall be payable over the quoted rates, except as specifically provided in the Contract.

56.3 All rates quoted in the Bill of Quantities shall be deemed to be inclusive of all types of direct and indirect taxes imposed by Central/State Govt. and local bodies such as excise duty, sales tax, value added tax (VAT), Works contract tax, Service tax, Royalties, Duties, Cess, Octroi and other levies as applicable and also include all import duties. The rates shall also be inclusive of all taxes, duties and other charges imposed outside the country on the production, manufacture, sale and transport of the Contractor's equipment, plant, materials and supplies to be used on or furnished under the contract and on the services performed under the contract. No additional amount shall be paid or claim be entertained on this account by Employer/Engineer.

56.4 The Contractor shall bear the cost of all royalties, fees and other payments in respect of patents, patents right and license(s) which may be payable to patentee, licensee or other person or corporation and shall obtain all necessary licenses/ permissions. In case of any breach (whether willfully or inadvertently) by the Contractor of this provision, the Contractor shall indemnify Employer, Engineer and their employees against all claims, proceedings, damages, costs, charges, loss and liability which they or any of them may sustain, incur or be put to by

reason or in consequence directly or indirectly of such breach and against payment of any royalties, damages or other money which the Employer/Engineer may have to make to any persons or pay in total to the patent rights in respect of the users of any machine, instruments, process, articles matter or thing constructed, manufactured, supplied or delivered by the Contractor under this contract.

57) ACCEPTED RATE APPLICABLE TILL THE COMPLETION OF WORK

The rates as per the accepted Bill of quantities, shall be firm and hold good till the completion of the works, and no additional claim or amount shall be admissible on account of fluctuations in market rates, increase in taxes, levies, fees royalties etc. unless specifically provided for in the Contract.

58) VARIATION IN QUANTITY OF ITEMS COVERED BY THE BILL OF QUANTITIES

58.1 The quantities of items shown in the Bill of Quantities are approximate, and liable to vary during the actual execution of the work. The Contractor shall be bound to carry out and complete the stipulated work, irrespective of the variations in individual items, specified in the Bill of Quantities.

58.2 Such variations in quantities shall be paid for in the manner laid down below:

In case the variation in individual items goes beyond (+)25% in respect of the specialized nature of works like tunneling works, Earthwork including rock blasting in hilly terrain for construction of access roads and the consequential works like protection works etc., where it is not possible to prepare fairly accurate estimate of quantities before award of the contract and it is not practical to bring a new agency for doing the increased quantity of work beyond (+)25% variation, 1% reduction in the accepted rate will be effected for payment to the Contractor beyond (+)25% variation and upto (+)50% variation.

In other works where it is generally possible to work out fairly accurate estimate before award of the contract, 2% reduction in the accepted rate will be effected beyond (+)25% variation and upto (+)50% variation.

In case the variation in individual items is more than (+)50%, the rate for the increased quantities beyond (+)50% shall be negotiated between the Engineer and the Contractor. Provided further that for the quantities exceeding (+)50% of each item of Bill of Quantities, the Engineer shall have a right to get these executed from any other agency or by his own labour, materials and resources.

Decrease in quantity of individual items upto (-)50% due to site conditions shall not form ground for revision of rates or claim on this account. Beyond (-)50% variation, rate shall be negotiated between the Engineer and the Contractor.

The above limit of variation shall not be applicable for small value items and no negotiations for rates for such items shall be done. Small value items shall be those items whose sum, starting from the lowest value item, is upto 2% of the original contract value and shall be decided between the Engineer and the Contractor.

As far as BOQ/SOR items are concerned, the limit of 25% would apply to the value of BOQ/SOR schedule as a whole and not on an individual BOQ/SOR items. However, in case of NS items, the limit of 25% would apply on the individual items irrespective of the manner of quoting the rate (single percentage rate or individual item rate).

59) ITEMS NOT INCLUDED IN THE BILL OF QUANTITIES

59.1 If any item of work not provided for in the accepted Bill of Quantities and required to be executed for completion of work, the Contractor on receipt of instructions from the Engineer, shall be bound to carry out such items of work at the rates to be decided as per sub-clause 59.2 and 59.3.

59.2 The rate for such extra items shall be derived from rate for similar items available in the accepted Bill of Quantities.

59.3 In case rates cannot be derived from the accepted Bill of Quantities, the rate may be worked out on the following basis:

Cost of materials and consumables at current market rates, as actually utilised in the final finished permanent work, including a reasonable percentage for wastage and cost of loading, unloading and transportation.

Cost of labour required for the work.

Hire charges for plant and machinery, scaffolding, shuttering, forms, etc. required to be used at the site of the work.

An amount of 10% of items (a), (b) and (c) above to allow for Contractor's overheads, profits and other contingencies.

59.4 In all cases where extra items of work are involved, for which there are no rates in the accepted Bill of Quantities, the Contractor shall give a notice to the Engineer, of at least 7 days before the need for their execution arises.

Such a notice shall not however be necessary if the Engineer has already instructed in writing to take up such an item of work. To decide the rate, the Contractor shall furnish detailed analysis of the rates on the lines mentioned in sub-clause 59.2 and 59.3 above and attend a meeting with Engineer to settle the rate as and when called for. The Contractor shall be bound to furnish the requisite details and to attend the meeting.

59.5 Provisional payment for extra item

In case mutually agreeable settlement of rates is not arrived at between the Engineer and the Contractor, the Contractor shall be bound to carry out the works at rates to be decided by the Engineer. In the absence of a finalised rate for a new item, the Engineer shall be entitled to certify payment to the Contractor based on a provisional rate fixed by the Engineer for the work done under the new item. This shall be subject to upward or downward adjustment after the rate is finalised by the Engineer for that item.

59.6 The decision of the Engineer under this clause shall be final and binding.

60) LIEN IN RESPECT OF CLAIMS IN OTHER CONTRACTS

Any moneys due to the Contractor either alone or jointly with others, including the performance guarantee amount returnable to him may be withheld or retained or encashed by exercise of lien by the Client/ Employer/Engineer against any claim of the Client/ Employer/Engineer or any other branch, office department or subsidiary of the client/ Employer/Engineer in respect of a sum of money arising out of or under any contract other than the present contract made by the Contractor alone or jointly with the client/ Employer/Engineer or any other branch, office, department or subsidiary of the client/ Employer/Engineer. It is agreed term of contract that the sum of money so withheld or retained under this clause by the client/ Employer/Engineer, shall be kept withheld or retained till the claims arising out of or under the contract, are either mutually settled or determined by the Arbitrator, or by the competent court, as the case may be and that the Contractor shall have no claim for interest or damages whatsoever on this account or any other account, in respect of any sums of money withheld retained, under this clause and duly notified to the Contractor.

61) MEASUREMENTS OF WORK AND PAYMENTS

Measurements

The Contractor shall be paid for the works at rates in the accepted Bill of Quantities of the contract and extra items of work at rates determined under clause 59.0of these conditions. The measurement shall be taken by the Engineer or his representative in the presence of the Contractor or his authorised representative.

Measurement of work at regular intervals

The measurements of the work shall be taken in accordance with the contract during progress of work and at such intervals, as in the opinion of the Engineer or Engineer's Representative shall be proper, having regard to the progress of the work. On an agreed date and time, the Engineer or his Representative shall take the on account or final measurements in the presence of the Contractor or his authorised representative. The Engineer or his authorised representative shall sign the measurements, which shall also be signed by the Contractor or his authorised representative as an acceptance of the measurements. If the Contractor or his representative fails to turn-up at the time of taking measurements inspite of notice to do so, the Engineer or his representative shall be entitled to record the measurements ex-parte and these shall be final and binding on the Contractor.

Measurement of works as per records and drawings

For the purpose of measuring such permanent works, as are to be measured by records and drawings, the Contractor shall prepare records and drawings at regular intervals and submit to the Engineer or Engineer's representative for his scrutiny.

In case, there is a discrepancy in the measurements of work done and the measurements as per drawings, measurements for the minimum of the two shall only be accounted for, provided the executed work is acceptable to the Engineer.

The Engineer or the Engineer's representative shall have the right to rectify any incorrect measurements and delete / correct any measurements if it is found at a later stage that the work is incomplete, defective and/or not conforming to the specifications.

62) ON ACCOUNT PAYMENTS

The Contractor shall be entitled to be paid from time to time, by way of "On-account" bills, only for such works, as in the opinion of the Engineer, the Contractor has executed in terms of the contract. Such payments shall be made at intervals to be decided by the Engineer depending upon the progress of work. Payment shall be made only on submission of bills along with measurements and necessary documents by the Contractor for scrutiny of the Engineer. The amount certified shall account for all deductions, including statutory deductions as for sales tax, income tax, etc., recoveries for advances and any amounts due from the Contractor. Such payments made by the Engineer shall not constitute any final acceptance of the measurements. In case of any discrepancy, the Engineer shall have the right to alter, modify, reduce or diminish the quantities or classification entered in the Measurement Books. In such cases, the Engineer shall have the right to recover any amount paid in an earlier bill/bills from any subsequent bill/bills and should the amount to be recovered be more than the amount of the subsequent bills, the Contractor shall on demand from the Engineer immediately refund the amount to the Engineer within 7 days, failing which he shall have to pay interest @1% per month till the said extra amount is paid back by him.

For materials brought to site by the Contractor, the Engineer may allow (interest free) payment @ 75% cost of major materials brought to site for use in the works as secured advance which will normally be paid along with next on account payment. The payment of secured advance shall be made without any bank guarantee but on written request of the Contractor along with indemnity bond indemnifying Employer/Engineer against any loss and/or damages to the materials for which secured advance is sought by the Contractor. The indemnity bond shall be submitted on a non-judicial stamp paper of minimum value of Rs.10/- duly not arised as per the format approved by the Engineer. The Contractor should supply necessary vouchers etc. as evidence that payment has been made by the Contractor for all the materials brought to site for which secured advance is sought by the Contractor. Secured advance shall be paid at the rates derived from the accepted rate of the item(s) for which the materials are to be consumed and procurement rates, whichever is lower. The Engineer's decision as to the Quality, Quantity and value of the materials for which such secured advance is payable will be final and binding on the Contractor. The recovery of secured advance so made will be made from the subsequent on account bills to the extent the materials are consumed in the work.

The Engineer may on specific request and authorisation by the Contractor in writing release payments directly to the Suppliers, sub-contractors or petty contractors of the Contractor from the amount(s) certified, passed and due for payment to the contractor..

In cases of default by the Contractor, the Engineer may without any notice to the Contractor, release payments directly to the suppliers/sub-contractors and/or petty contractors of the Contractor. All such payments shall be recovered with interest @ 1.25% (including administrative charges) per month from the payments due to the Contractor.

In exceptional circumstances, if the Contractor is not able to make prompt payments to his suppliers affecting supplies of materials and progress of work, the Engineer may (but shall not be

obliged to) give assurance to the suppliers for payments against supply of materials/consumables to the Contractor. In this case, the Contractor shall give to the Engineer an undertaking in writing that cost of such materials if not paid by him may be directly paid to his suppliers and recovered from his dues. Such payments shall only be made after receipt of materials at site and verification of the payments by the Contractor. The recovery of such payments shall be made with interest @ 1.25% (including administrative charges) per month from the next payment due to the Contractor. Total payments so made on behalf of the contractor shall not exceed 5% of the Contract value during the entire contract period..

The decision of the Engineer regarding exceptional circumstances and payments to be made to the suppliers, sub-contractors and petty contractors under the clause Nos. 62.3, 62.4 and 62.5 shall be final and binding on the Contractor. Such payments shall also not relieve the Contractor from any of his liabilities or obligations under the Contract.

No payment under the contract shall be made to the Contractor before receipt of performance security. The Engineer shall also be entitled to with hold payment under the above sub-clauses in case the Contractor fails to get himself registered under sales tax/labour laws or fails to fulfill his obligation under the contract.

63) FINAL MEASUREMENTS AND PAYMENTS

As soon as possible after completion of work, the Contractor shall submit the final bill along with detailed measurements of work done, account of the materials, plant and machinery issued by the Engineer and all other statements, supporting documents required for finalisation of the bill. The final bill, measurements and documents submitted by the Contractor shall be scrutinised by the Engineer or his representative and in case the same are found not in order, the Engineer shall direct the Contractor to re-submit the final bill along with all details. On receipt of all requisite details and final bill from the Contractor, the Engineer shall have the final measurements taken, recorded and signed jointly. An account of any plant, equipment and materials issued by the Engineer to the Contractor, shall also be prepared and signed jointly. Based on the final measurements and materials and plant and equipment account statements, the Engineer shall prepare the final bill.

The Contractor shall sign the Engineer's copy of the Final Bill Account in token of acceptance of the full and final value of the works performed under the contract, and submit a "No Claim Certificate" on the prescribed proforma along with a list of unsettled claims, if any. The Engineer shall then arrange to make payment against the final bill.

64) MODE OF PAYMENT AND TAX DEDUCTION AT SOURCE

64.1 MODE OF PAYMENT:

64.1.1 All payments to the Contractor shall be made through Electronic Clearing System (ECS). The Contractor shall furnish his Banker's details in addition to his own bank account details. All amounts payable to the Contractor shall be directly credited to his bank account.

64.1.2 In case, the Contractor is having his account with a bank not having Electronic Clearing System (ECS), the Contractor may open a bank account with the bank having this facility.

64.1.3 All payments to the Contractor shall be made by above means only unless specifically otherwise agreed by the Engineer in special circumstances for petty payments.

64.2 Tax deduction at source

Income tax and Works tax shall be deducted from the payments credited/released by Employer/Engineer to the Contractor against execution of work as per law of the land. The deductions shall be made as per prescribed rates prevalent from time to time unless a tax exemption certificate is produced by the Contractor. Amount of tax deduction shall be deposited with the concerned authorities and tax deduction certificate shall be issued by Employer/Engineer. The Employer/Engineer shall deduct at source taxes/duties under any other law/statute as may be applicable at the time of making payments. The Contractor shall furnish to the Engineer registration No. under works tax and PAN(for TDS), as applicable.

65) COMPLETION CERTIFICATE

As soon as the work is completed, the Contractor shall give notice of such completion, whether of the whole of the works, or of any part of the work, for which a separate date of completion is stipulated in the contract, to the Engineer, and the Engineer, within 30 days of receipt of such notice, shall inspect the work and also arrange for carrying out of such tests as may be prescribed under the contract or ordered by the Engineer. If the Engineer notices any incomplete item of work or any defect, which is to be rectified by the Contractor, or if any part or whole of the work fails to pass the specified tests, the

Engineer shall furnish to the Contractor, the list of all such incomplete items of work, deficiencies, defects, failure to pass tests, etc., and may refuse to issue a Certificate of Completion to the Contractor. If in the opinion of the Engineer the work has been satisfactorily completed and has satisfactorily passed final test or tests that may be prescribed, the Engineer shall issue a certificate of completion showing the date of completion in respect of the work. The defect liability period, if any, shall commence from the date of completion indicated in such certificate. Provided that the Engineer may issue such a certificate with respect to any part of the works, before the completion of the whole of the works, which has been so completed and/or used by the Client/Employer/Engineer. When any such certificate is given in respect of a part of the work, such part shall be considered as completed and the defect liability period of such part shall commence from the date of completion indicated in such certificate.

Completion certificate not to absolve the Contractor from his Responsibilities:

The Certificate of Completion of Works referred to in sub-clause 65.1 shall not absolve the Contractor from his liability to make good defects, imperfections and shrinkages or faults, which may appear during the defect liability period specified in the contract, arising in the opinion of the Engineer from materials or workmanship being not in accordance with the Contract. These shall be rectified and made good by the Contractor at his own cost. In case of the default on the part of the Contractor, to so make good the defects or deficiencies, the Engineer may employ labour, plant and machinery and materials or appoint another agency or Contractor, to make good such defects, imperfections, shrinkages and faults, and all expenses consequent and incidental thereto, shall be recovered from any money due to the Contractor under the contract including the Performance Security amount or from any money payable to the Contractor by the Employer/Engineer, under any other contract.

66) CLEARANCE OF SITE ON COMPLETION

On completion of works, the Contractor shall clear and remove from site all constructional plant, surplus materials, rubbish and temporary works of every kind, and leave the whole of the site of work clean, tidy and in a workman like condition to the satisfaction of the Engineer. This will be one of the pre-conditions for making the final payment to the Contractor. Such clearance may be made by the Engineer through any other agency at the expense of the Contractor in the event of the Contractor's failure to comply with this provision within 7 days after receiving notice to that effect from the Engineer.

67) POST PAYMENT AUDIT

It is an agreed term of the contract that the Employer reserves to himself the right to carry out a post payment audit or technical examination of the works, and the final bill including all supporting vouchers, abstracts, etc. If as a result of such examination, any over payment to the Contractor is discovered to have been made in respect of any work done, the Contractor will be bound to refund the same to the Engineer or may be adjusted against any dues of the Contractor. If any under payment is discovered, the same shall be paid by the Engineer to the Contractor. Such payments or recoveries, however, shall not carry any interest.

68) DEFECT LIABILITY CERTIFICATE

68.1 In the contract, the expression “Defect Liability Period” shall mean the period of defect liability prescribed elsewhere in the contract, commencing from the date of completion of the works, as certified by the Engineer.

The Contractor shall maintain, rectify and make good at his own cost any defects/deficiencies, which may develop in the work or as notified by the Engineer during Defect Liability Period. However, maintenance during Defect Liability Period shall not include day to day upkeep, cleaning, custody and security of the work.

68.2 The contract shall not be considered as completed, until a Defect Liability Certificate has been issued by the Engineer stating that the works have been completed and maintained to his satisfaction. Defect Liability certificate shall be issued by the Engineer, upon expiry of Defect Liability period or as soon thereafter as any works ordered during such period, have been completed to the satisfaction of the Engineer.

68.3 No certificate other than “Defect Liability Certificate” shall be deemed to constitute final approval of the work or part of the work for which it is issued.

69) UNFULFILLED OBLIGATIONS

Notwithstanding the issue of Defect Liability Certificate, the Contractor and the Engineer shall remain liable for the fulfilment of any unfulfilled obligations under the provision of the contract, prior to the issue of the Defect Liability Certificate, and for the purpose of determination of the nature and extent of any such obligation, the contract shall be deemed to remain in force between the parties thereto.

70) PRODUCTION OF VOUCHERS

70.1 The Contractor, whenever required, shall produce for examination by the Engineer, any quotation, invoice, cost or other account books, vouchers, receipts, letters, memoranda or any copy of or extract from any such documents and also furnish information and returns, as may be required, relating to the execution of this contract. The Engineer's decision on the question of relevancy of any documents, information or returns shall be final and binding on the Contractor.

If any part or item of the work is allowed to be carried out by a sub-Contractor, the Engineer shall have power to secure the books of such sub-Contractor, through the Contractor, and shall have power to examine and inspect the same.

71) FORCE MAJEURE

71.1 If, at any time during the currency of the contract, the performance of any obligation (in whole or in part) by the Employer or the Contractor shall be prevented or delayed by reason of any war, hostilities, invasion, acts of public or foreign enemies, rebellion, revolution, insurrection, civil commotion, sabotage, large scale arson, floods, earthquake or any other act of God, large scale epidemics, nuclear accidents, any other catastrophic unforeseeable circumstances, quarantine restrictions, any statutory, rules, regulations, orders or requisitions issued by a Government department or competent authority (hereinafter referred to as "event") then, provided notice of the happening of such an event is given by either party to the other within 21 days of the occurrence thereof.

a. Neither party by reason of such event be entitled to terminate the contract or have claim for damages against the other in respect of such non-performance or delay in performance.

b. The obligations under the contract shall be resumed as soon as practicable after the event has come to an end or ceased to exist.

c. If the performance in whole or part of any obligation under the contract is prevented or delayed by reason of the event beyond a period of 180 days, the contract may be fore-closed with mutual consent by giving a notice of 30 days without any repercussions on either side.

d. In case of doubt or dispute, whether a particular occurrence should be considered an "event" as defined under this clause, the decision of the Engineer shall be final and binding.

e. Works that have already been measured shall be paid for by the Engineer even if the same is subsequently destroyed or damaged as a result of the event. The cost of rebuilding or replacing any work that has been measured shall be borne by the Employer/Engineer.

f. If the contract is fore-closed under this clause, the Contractor shall be paid fully for the work done under the contract, but not for any defective work or work done which has been destroyed or damaged before its measurement. The Engineer shall have the option to take over any plant and material lying at site, at rates provided for in the contract, failing that, as per rates which are determined to be fair and reasonable by the Engineer.

71.2 If no notice is issued by either party regarding the event within 21 days of occurrence, the said event shall be deemed not to have occurred and the contract will continue to have effect as such.

72) CLAIMS

72.1 Monthly Statement of Claims:

The contractor shall prepare and furnish to the Engineer once in every month an account giving full and detailed particulars of all claims for any additional expenses to which the Contractor may consider himself entitled to and of all extra or additional works ordered by the Engineer which he has executed during the preceding month and no claim for payment for and such works will be considered which has not been included in such particulars.

Non-receipt of statement of claims shall be construed that contractor has 'no claim'.

72.2 Signing of “No Claim” Certificate:

The contractor shall not be entitled to make any claim whatsoever against HRIDC under or by virtue of or arising out of this contract, nor shall HRIDC entertain or consider any such claim, if made by the Contractor, after he shall have signed a “No Claim” Certificate in favour of HRIDC in such form as shall be required by HRIDC after the works are finally measured up. The Contractor shall be debarred from disputing the correctness of the item covered by “No Claim” Certificate or demanding a clearance to arbitration in respect thereof.

73) SETTLEMENT OF DISPUTES

All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the work or after its completion and whether before or after the determination of the contract, shall be settled as under, provided that matters for which provision has been made in clauses 20.3, 36.5, 40.1, 40.2, 49.7, 50.0, 51.0, 59.0, 61.2 and 72.2 of General Conditions of Contract or in any clause of the Special Conditions of Contract shall be deemed as ‘excepted matters’ (matters not arbitrable) and decision of the Employer thereon, shall be final and binding on the contractor; provided further that 'excepted matters' shall stand specifically excluded from the purview of this clause.

73.1 Mutual Settlement

All such disputes or differences shall in the first place be referred by the Contractor to the Employer in writing for resolving the same through mutual discussions, negotiations, deliberation etc. associating representatives from both the sides and concerted efforts shall be made for reaching amicable settlement of disputes or differences.

73.2 Conciliation/Arbitration

73.2.1 It is a term of this contract that Conciliation/ Arbitration of disputes shall not be commenced unless an attempt has first been made by the parties to settle such disputes, within 120 days of submission of monthly statement of such claim, through mutual settlement.

73.2.2 In the event of failure to resolve any dispute or difference between the parties hereto as to the construction or operation of this contract, or the respective rights and liabilities of the parties on any matter in question, dispute or difference on any account or as to the withholding by the Employer of any certificate to which the contractor may claim to be entitled to, through mutual settlement, the Contractor may refer such matters to the Managing Director in writing within 60

days from the date of failure of amicable settlement of such disputes or differences for settlement through Conciliation.

If the efforts to resolve all or any of the disputes through Conciliation fail, the Contractor may refer to the Managing Director of the Employer for settlement of such disputes or differences through Arbitration. No disputes or differences shall be referred to Arbitration after expiry of 60 days from the date of notification of the failure of Conciliation.

73.2.3 The demand for Conciliation or Arbitration shall specify the matters which are in question, or subject of the dispute or difference as also the amount of claim item wise. Only such dispute(s) or difference(s) in respect of which the demand has been made, together with counter claims or set off, given by the Employer, shall be referred to Conciliation or Arbitration and other matters shall not be included in the reference.

73.2.3(a) The Arbitration proceeding shall be assumed to have commenced from the day, a written and valid demand for arbitration is received by the Employer.

73.2.3(b) The claimant shall submit his claim stating the facts supporting the claim along with all relevant documents and the relief or remedy sought against each claim within a period of 30 days from the date of appointment of the Arbitral Tribunal.

73.2.3(c) The Employer shall submit its defence statement and counter claim(s), if any, within a period of 60 days of receipt of copy of claim from Tribunal thereafter unless otherwise extension has been granted by Tribunal.

73.2.3(d) Place of Arbitration:

The conciliation/ arbitration proceedings shall be held at a place decided by Conciliator/ Arbitrator.

73.2.4 No new claim shall be added during proceedings by either party. However, a party may amend or supplement the original, claim or defence thereof during the course of arbitration proceedings subject to acceptance by Tribunal having due regard to the delay in making it.

73.2.5 If the contractor(s) does/do not present his/their specific and final claim in writing, within a period of 90 days of receiving the intimation from the Employer that the final bill is ready for payment, he/they will be deemed to have waived his/their claim(s) and the Employer shall be discharged and released of all liabilities under the contract in respect of these claims.

73.3 No suspension of work

The Obligations of the Employer, the Engineer and the Contractor shall not be altered by reasons of conciliation / arbitration being conducted during the progress of works. Neither party shall be entitled to suspend the work on account of conciliation/ arbitration and payments to the Contractor shall continue to be made in terms of the contract.

73.4(a)(i) Sole Conciliator/Sole Arbitrator:

In cases where the total value of all claims/counter-claims in question added together does not exceed `2.00 Crore (Rupees Two Crores), the Arbitral Tribunal shall consist of a sole arbitrator who shall be an officer of HRIDC not below GM level, nominated by the Managing Director.

The sole arbitrator shall be appointed by the Managing Director of the Employer within 60 days from the day when a written and valid demand for arbitration is received by the Employer.

73.4(a) (ii) Arbitration Tribunal:

In cases where the total value of all claims/counter-claims exceeds `2.00 Crore, the Arbitral Tribunal shall consist of a panel of three Officers not below GM level.

For this purpose, the Employer will send a panel of more than 3 names to the contractor, within 60 days from the day when a written and valid demand for arbitration is received by the Employer. Contractor will be asked to suggest to the Managing Director at least 2 names out of the panel for appointment as contractor's nominee within 30 days from the date of dispatch of the request by the Employer. The Managing Director shall appoint at least one out of them as the contractor's nominee and will, also simultaneously appoint the balance number of arbitrators either from the panel or from outside the panel, duly indicating the 'presiding arbitrator' from amongst the 3 arbitrators so appointed. The Managing Director shall complete this exercise of appointing the Arbitral Tribunal within 30 days from the receipt of the names of contractor's nominees. While nominating the arbitrator sit will be necessary to ensure that one of them is from the Accounts Department. An officer of AGM rank of the Accounts Department shall be considered of equal status to the GM of the other departments of HRIDC for the purpose of appointment of arbitrator.

73.4(a) (iii) The minimum qualifications of Conciliator/ Arbitrator shall be graduate in the respective field. He will be a working officer with a minimum of 20 years' service. He should be clear from the vigilance angle and should be a person with reputation of high technical/commercial ability and integrity. Also, he should not have associated with the contract to which the dispute pertains.

73.4(a)(iv) If one or more of the arbitrators appointed as above refuses to act as arbitrator, withdraws from his office as arbitrator or vacates his/their office/offices or is/are unable or unwilling to perform his functions as arbitrator for any reason whatsoever or dies or in the opinion of the Managing Director fails to act without undue delay, the Managing Director shall appoint new arbitrator/ arbitrators to act in his/their place in the same manner in which the earlier arbitrator/ arbitrators had been appointed. Such reconstituted Tribunal may, at its discretion, proceed with the reference from the stage at which it was left by the previous arbitrator(s).

73.4(a)(v) The Arbitral Tribunal shall have power to call for such evidence by way of affidavits or otherwise, as the Arbitral Tribunal shall think proper, and it shall be the duty of the parties hereto to do or cause to be done all such things as may be necessary to enable the Arbitral Tribunal to make the award without any delay. The Arbitral Tribunal should record day-to-day proceedings. The proceedings shall normally be conducted on the basis of documents and written statements.

73.4(a)(vi) While appointing arbitrator(s) under sub clause 73.4(a)(i), 73.4(a)(ii) and **73.4(a)(iv)** above, due care shall be taken that he/they is/are not the one/those who had an opportunity to deal with the matters to which the contract relates or who in the course of his/their duties as HRIDC employee expressed views on all or any of the matters under disputes or differences. The proceedings of the Arbitral Tribunal or the award made by such Tribunal will, however, not be invalid merely for the reason that one or more arbitrator had, in the course of his service, opportunity to deal with the matters to which the contract relates or who in the course of his/their duties expressed views on all or any of the matters under dispute.

73.4(b)(i) The arbitral award shall state item-wise, the sum and reasons upon which it is based. The analysis and reasons shall be detailed enough so that the award could be inferred there from.

73.4(b)(ii) A party may apply for corrections of any computational errors, any typographical or clerical errors or any other error of similar nature occurring in the award of tribunal within 60 days of the receipt of the award.

73.4(b)(iii) A party may apply to tribunal within 60 days of the receipt of award to make an additional award as to claims presented in the arbitral proceedings but omitted from the arbitral award.

73.5 In case of the Tribunal, comprising of three members, any ruling or award shall be made by a majority of members of Tribunal. In the absence of such a majority, the views of the Presiding Arbitrator shall prevail.

73.6 Where the arbitral award is for the payment of money, no interest shall be payable on whole or any part of the money for any period till the date on which the award is made.

73.7 The cost of arbitration shall be borne by the respective parties. The cost shall inter-alia include fee of the Conciliator/ Arbitrator(s) as per the rates fixed by the Employer from time to time and the fee shall be borne equally by both the parties. Further, the fee payable to the arbitrator(s) would be governed by the instructions issued on the subject by the Employer from time to time irrespective of the fact whether the arbitrator(s) is/are appointed by the Employer or by the court of law unless specifically directed by Hon'ble court otherwise on the matter.

73.8 Settlement through Court:

It is a term of this contract that the Contractor shall not approach any Court of Law for settlement of such disputes or differences unless an attempt has first been made by the parties to settle such disputes or differences through clauses 73.1 and 73.2.

73.9 The Conciliation and/or Arbitration proceedings shall be governed by the provisions of the Indian Arbitration and Conciliation Act 1996 or any statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force.

73.10 The language of proceedings, documents or communications shall be in English and the award shall be made in English in writing.

73.11 Award to be final and binding on all parties:

An arbitral award shall be final and binding on all parties, as per provision of Arbitration and Conciliation Act, 1996.

73.12 Exception:

For settlement of disputes with central PSUs, the procedure as per existing orders of Permanent Machinery for Arbitration (PMA), Bureau of Public Enterprises, Govt. of India shall be followed.

73.13 JURISDICTION OF COURTS:

Jurisdiction of courts for dispute resolution shall be Chandigarh/Panchkula.

FORM OF AGREEMENT

(To be executed on requisite value of stamp Papers)

AGREEMENT

THIS AGREEMENT made on _____ day of _____ (Month/year) between Haryana Rail Infrastructure Development Corporation Limited, acting through Managing Director (hereinafter called “the Employer/Engineer”) of the one part and _____ (name and address of the Contractor) (hereinafter called “the Contractor”) of the other part.

WHEREAS the Employer is desirous that certain works should be executed by the Contractor viz. _____ Contract No. _____ (hereinafter called “the Works”, and has accepted a Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH as follows:

In this Agreement, words and expressions shall have the same meaning as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

The following documents shall be deemed to form and be read and construed as part of this Agreement:

- i. Letter of Acceptance of Tender
- ii. Notice Inviting Tender
- iii. Instructions to the Tenderers
- iv. Appendix to Tender
- v. Form of Bid
- vi. Special Conditions of the Contract
- vii. General Conditions of Contract
- viii. Technical Specifications
- ix. Relevant codes and Standards
- x. Drawings
- xi. Bill of Quantities

In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.

The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement executed the day and year first before written.

(Name, Designation and address of the authorized signatory)		(Name, Designation and address of the authorized signatory)
Signed for and on behalf of the Contractor in the presence of:		Signed for and on behalf of the Employer in the presence of:
Witness:		Witness:
1.		1.
2.		2.

Name and address of the witnesses to be indicated.

PERFORMANCE BANK GURANTEE (UNCONDITIONAL)

To

Haryana Rail Infrastructure Development Corporation Limited,
Name & Address.

[Acting through _____ (Project Incharge) & Address of the Project]

WHEREAS _____ [name and address of contractor] (hereinafter called “the Contractor”) has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ [name of Contract and brief description of Works] (hereinafter called “the Contract.”);

AND WHEREAS it has been stipulated by you in the said Contract that the contractor shall furnish you with a Bank Guarantee by any Scheduled Bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ [amount of Guarantee], _____ [amount in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of Guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid up to _____ (a date 60 days from the date of completion of the work).

SIGNATURE AND SEAL OF THE GUARANTOR

	Name of Bank:		
	Address:		
	Date:		

BANK GURANTEE FOR RELEASE OF 50% OF RETENTION MONEY

To
 Haryana Rail Infrastructure Development Corporation Limited,
 Name & Address.
 [Acting through _____ (Project Incharge) & Address of the Project]

WHEREAS _____ [name and address of contractor*] (hereinafter called “the Contractor”) has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ [name of Contract and brief description of Works] (hereinafter called “the Contract.”);

AND WHEREAS it has been agreed by you in the said Contract that the Contractor has option to get release 50% of the Retention Money against un-conditional Bank Guarantee from any Scheduled Bank acceptable to you as security for compliance with Contractor’s obligation in accordance with the contract (Sub clause _____).

AND WHEREAS the Contractor has opted to get released the 50% of the retention money against an unconditional Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ [amount of Guarantee], _____ [amount in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of Guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid upto _____ (till the HRIDC International Limited certifies repayment of retention money in accordance with Sub-clause 8.5 of General Conditions of Contract).

SIGNATURE AND SEAL OF THE GUARANTOR

	Name of Bank:		
	Address:		