



GOVT. OF HARYANA

HARYANA PUBLIC WORKS (B&R) DEPARTMENT CHANDIGARH

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STANDARD BIDDING DOCUMENT PROCUREMENT OF CIVIL WORK ROB & BRIDGES

Amended Dated: 27.10.2014

PART 1: COMPLETE BIDDING DOCUMENT

PRESS NOTICE

Haryana PWD (B&R)

No. /PWD

Dated:

Notice Inviting Tender

The Governor of Haryana invites the bids from eligible bidders through online bids in the website: <http://haryanapmgsy.etenders.in> for the work detailed in the table.

TABLE

<u>Package No.</u>	<u>Name of Work</u>	<u>Approximate value of Works (Rs.)</u>	<u>Bid security (Rs.)</u>	<u>Cost of document (Rs.)</u>	<u>Time limit</u>	<u>Date and time for bid preparation to Hash Submission</u>
1	2	3	4	5	6	7
		Rs..... Lacs	Rs..... lacs for Societies/ Contractor(s)	Rs..... ./-	-----	----- 10.01 Hrs to 17.00 Hrs

1. Pre bid meeting will be held on at 11.30 Hrs. In the office of Engineer-In-Chief, Haryana PWD (B&R) Br., Chandigarh/Superintending Engineer.....Circle, Haryana PW (B&R), Department.....
2. Cost of Bid document (to be paid only online) is Rs. /- (non-refundable) for each bid.
3. For further details and e-tendering schedule visit website <http://haryanapwd-bandr.org> / <http://haryanapmgsy.etenders.in>

Superintending Engineer,

Circle,
Haryana PW (B&R) Deptt.

INVITATION FOR BID

(IFB)

DETAIL NOTICE INVITING TENDERS

The Governor of Haryana invites the bids from eligible bidders through online bids in the website: <http://haryanapmgsy.etenders.in> for the work detailed in the table.

TABLE

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1	2	3	4	5	6	7
		Rs..... Lacs	Rs..... lacs for Societies/ Contractor(s)	Rs..... ./-	-----	----- 10.01 Hrs to 17.00 Hrs

1. Bidding Documents can be downloaded online from the Portal <http://haryanapmgsy.etenders.in> by the Societies / Contractors registered on the Portal.
2. Pre-bid meeting will be held on ----- at 11.30 Hrs. in the office of Engineer-in-Chief, Haryana PW (B&R) Deptt., Chandigarh/Superintending Engineer,.....Circle, Haryana PW (B&R) Department.....to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in clause 9.2 of 'Instruction to Bidders' of the bidding document.
3. Bids to be submitted online are required to be encrypted and digitally signed, the Bidders are advised to obtain the same at the earliest. For obtaining Digital Certificate, the Bidders may contact the representative of Nex Tenders, the Service Providers of Electronic Tendering System.
4. The contractual Agencies can submit their tender documents (Online) as per the dated mentioned in the key Dates given below:-

Sr. No.	PW (B&R) Deptt. Stage	Contractor Stage	Start Date and Time	Expiry Date and Time
1.	Release of Tender	-	----- 10.00 hrs	----- 10.00 hrs
2.	-	Download Tender Document	----- 10.01 hrs	----- 17.00 hrs
3.	-	Online Bid Preparation & Hash Submission	----- 10.01 hrs	----- 17.00 hrs
4.	Technical and Financial Lock	-	----- 17.01 hrs	----- 17.00 hrs
5.	-	Re-encryption of Online Bids	----- 17.00 hrs	----- 17.00 hrs
6.		Manual Submission of EMD	----- 10.00 hrs	----- 11.00 hrs
7.	Open EMD & Technical/PQ bid	-	----- 11.00 hrs	----- 17.00 hrs
8.	Technical Evaluation	-	----- 11.30 hrs	----- 17.00 hrs
9.	Open Financial/ Price-Bid	-	To be announced later	-----17.00 hrs

5. The Bidders can download the bidding documents from the Portal <http://haryanapmgsy.etenders.in>. Tender Document Fees has to be paid online during the Bid Preparation and Hash Submission stage and Bid Security has to be submitted in a separate sealed BS envelope. The Signaturer of Tenderer

bidders shall have to pay the Tender Document Fees mentioned against the work at the time of Bid Preparation and Hash Submission stage. The Bid Security /Earnest Money will have to be in any one of the form as specified in the bidding documents. The BS envelop has to reach in the office of Executive Engineer, Provincial Division no.-----.

6. Superintending Engineer----- circle, Haryana PW (B&R) Deptt. on -----09.00 hrs to ----- 11.00 hrs.. However, as the details of the Bid Security are required to be filled at the time of Bid Preparation and hash Submission stage, the Bidders are required to keep the BS ready appropriately.

7. The tender shall be submitted by the tenderer in the following three separate envelops:

1. Earnest Money - Envelope 'BS' (Scanned copy online and hard copy in physical form)
2. N.I.T. and Technical Bid – Envelope 'TI' (on line)
3. Tender in form – A (Price Bid) - Envelope 'CI' (on line)

Note:- Online Bidders are required to submit the physical BS in a physical BS Envelop – 'BS'. Price Bids and Technical Bids are to be submitted mandatory online and shall not be accepted in any physical form.

Reference of the BS is to be mentioned online.

Above envelop, as applicable, shall be kept in a big outer envelop, which shall also be sealed. In the first instance, the Envelop – 'BS' of all the Bidders containing the Bid Security shall be opened online and physically. If the Earnest Money is found proper, Technical Bid shall be opened (on line) in the presence of such contractors who choose to be present. The Financial offer in Envelop in 'CI' shall be opened (on line) only if the tenderers meet the qualification criteria as per the Bid document. The date of opening of Financial Bid shall be fixed at the time of opening of Technical Bid.

The Contractual Agencies will submit the necessary documents as under.

Envelope 'BS' – Bid Security Envelope

Physical BS Envelop – The Bid Security will have to be in any one of the forms as specified in the bidding document.

Online BS Envelope – Reference details of the Bid Security instrument and scanned copy of the Bid Security).

In case Financial bid is submitted but Bid Security has not been submitted by any bidder, then bidder would be debarred from further tendering in Haryana PW (B&R) Deptt. for a period of minimum one year.

Adjustment of tender document fees of the Contractors/ Agency:

1. “Single tender shall normally not be considered unless there are special circumstances to do so. In such eventuality, decision to accept the single tender shall be as prescribed in the rules. If special circumstances are not present, tenders shall be re-called. If re-tendering again results in a single tender, its acceptance may be considered with proper justification and reasons”

2. Those bidders shall not be required to pay tender document fees, who choose to submit bids again on tender being re-called on account of single tender /bid being received on first call.

Envelope 'CI' – Price Bid Envelope

Information related to Price Bid of the tender to be submitted mandatorily online.

The envelop marked BS shall be submitted clearly marking the name of agency and name of work.

The contractual Agencies can submit their tender documents (Online) as per the dates mentioned in the key Dates above.

CONDITIONS:-

1. Approved DNIT & Prequalification documents can be seen on any working day during office hours in office of the undersigned. Though proper care has been taken to upload approved DNIT. However, there may be some discrepancy. In case of discrepancy between approved DNIT and uploaded DNIT. The approved DNIT will be applicable. The approved DNIT will be made part of agreement.
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 reserves the right to reject any tender or all the tenders without assigning any reason.
5. The societies shall produce an attested copy of the resolution of the Co-Operative department.
6. The tenders without earnest money / Bid security will not be opened.
7. The jurisdiction of court will be at -----.
8. The tender of the bidder who does not satisfy the qualification criteria in the bid documents are liable to be rejected summarily without assigning any reason and no claim whatsoever on this account will be considered.
9. The bid for the work shall remain open for acceptance during the bid validity period to be reckoned from the last date of '**manual submission of (Technical) documents & BS**'. If any bidder/tenderer withdraws his bid/tender before the said period or makes any modifications in the terms and condition of the bid, the said earnest money shall stand forfeited. Bids would required to be valid for 120 days from the date of bid closing i.e. from last date of manual submission of (Technical) documents and EMD. In case the last day to accept the tender happens to be holiday , validity to accept tender happens to be holiday, validity to accept tender will be the next working day.

Executive Engineer,
Provincial Division, No.---
Haryana, PW (B&R)-----

Superintending Engineer,
_____ Circle,
Haryana PW (B&R) -----

Endorsement No.

Dated

A copy of above is forwarded to the following for information and wide publicity:-

- (1) The Deputy Commissioner, -----.
- (2) The Engineer-in-Chief, Haryana, PW (B&R) Deptt.,-----.
- (3) The Superintending Engineer ----- Circle, PW (B&R) Deptt. -----.
- (4) All the SDE's under Provincial Division No. ---, -----.
- (5) The Manager co-op. L&C Society -----.
- (6) All enlisted Contractor/Society of PW (B&R) Deptt. Of appropriate class. Contractors of Delhi and nearby States.
- (7) Deputy Superintendent/H.D.M./Divisional Accountant/Notice Board.
- (8) The Assistant Registrar Co-op Societies -----.

Executive Engineer,
Provincial Division, No.---
Haryana, PW (B&R)-----

Superintending Engineer,
_____ Circle,
Haryana PW (B&R) -----

Signaturer of Tenderer

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E.E.

SECTION 1
INSTRUCTIONS TO BIDDERS
(ITB)

SECTION 1: INSTRUCTIONS TO BIDDERS

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A. GENERAL

1. Scope of Bid

1.1. The Employer (named in Appendix to ITB) invites bids for the construction of works (as defined in these documents and referred to as “the works”) detailed in the table given in IFB. The bidders may submit bids for any or all of the works detailed in the table given in IFB.

1.2 The successful bidder will be expected to complete the works by the intended completion date specified in the Contract data.

1.3. Throughout these bidding documents, the terms ‘bid’ and ‘tender’ and their derivatives (bidder/tenderer, bidding/tendering, etc.) are synonymous.

2. Source of Funds

2.1. The expenditure on this project will be met from the budget of Govt. of Haryana under Head

3. Eligible Bidders

3.1. This Invitation for Bids is open to all bidders.

3.2 All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a statement that the Bidder is neither associated, nor has been associated, directly or indirectly, with the Consultant or any other entity that has prepared the design, specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation or supervision of the works, and any of its affiliates, shall not be eligible to bid.

4. Qualification of the Bidder

4.1. All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary. The proposed methodology should include programme of construction backed with equipment planning and deployment duly supported with broad calculations and quality assurance procedures proposed to be adopted justifying their capability of execution and completion of work as per technical specifications, within stipulated period of completion.

4.2* Deleted.

4.3. If the Employer has not undertaken prequalification of potential bidders, all bidders shall include the following information and documents with their bids in Section 2:

- a) Copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the Bid to commit the Bidder
- (b) Total monetary value of construction work performed for each of the last five years;
- (c) Experience in works of a similar nature and size for each of the last five years, and details of works underway or contractually committed; and clients who may be contacted for further information on those contracts;
- (d) Major items of construction equipment proposed to carry out the Contract;
- (e) Qualifications and experience of key site management and technical.....
personnel proposed for Contract;

- (f) Reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years;
- (g) Evidence of access to line (s) of credit and availability of other financial resources facilities (10% of contract value), certified by the Bankers (Not more than 3 months old)
- (h) Undertaking that the bidder will be able to invest a minimum cash upto 25% of contract value of work, during implementation of work.
- (i) Authority to seek references from the Bidder's bankers;
- (j) Information regarding any litigation, current or during the last five years, in which the Bidder is involved, the parties concerned, and disputed amount;
- (k) proposals for subcontracting components of the Works amounting to more than 10 per-cent of the Bid price (for each, the qualifications and experience of the identified sub-contractor in the relevant field should be annexed); and
- (l) the proposed methodology and programme of construction, backed with equipment planning and deployment, duly supported with broad calculations and quality control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion as per milestones (*for all contracts over Rs. 5 Crore*).

4.4.(i) Bids from Joint ventures are not acceptable for projects costing less than Rs.25 Crore.

(ii) Guidelines for participation of Joint Venture Firms.

1. Separate identity/name shall be given to the Joint Venture firm.
2. Number of members in a JV shall not be more than three.
3. A member of JV firm shall not be permitted to participate either in individual capacity or as a member of another JV firm in the same tender.
4. The tender form shall be purchased and submitted only in the name of the JV firm and not in the name of any constituent member.
5. Normally EMD shall be submitted only in the name of the JV and not in the name of constituent member. However, in exceptional cases EMD in the name of lead partner can be accepted subject to submission of specific request letter from lead partner stating the reasons for not submitting the EMD in the name of JV and giving written confirmation from the JV partners to the effect that the EMD submitted by the lead partner may be deemed as EMD submitted by JV firm.
6. One of the member of the JV firm shall be the lead member of the JV firm who shall have a majority (at least 51%) share of interest in the JV firm. The other members shall have a share of not less than 20% each in case of JV firms with up to three members. In case of JV firm with foreign member's), the lead member has to be an Indian firm with a minimum share of 51%.
7. A copy of Memorandum of Understanding (MOU) executed by the JV members shall be submitted by the JV firm along with the tender. The complete details of the members of the JV firm, their share and responsibility in the JV firm etc. particularly with reference to financial technical and other obligations shall be furnished in the MOU. Format of MOU is enclosed as Annexure K-1.
8. Once the tender is submitted, the MOU shall not be modified/altered/terminated during the validity of the tender. In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money

Deposit (EMD) shall be forfeited. In case of successful tenderer, the validity of this MOU shall be extended till the currency of the contract expires.

9. Approval for change of constitution of JV firm shall be at the sole discretion of the Employer. The constitution of the JV firm shall not be allowed to be modified after submission of the tender bid by the JV firm except when modification becomes inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. In any case the Lead Member should continue to be the Lead Member of the JV firm. Failure to observe this requirement would render the offer invalid.

10. Similarly, after the contract is awarded, the constitution of JV firm shall not be allowed to be altered during the currency of contract except when modification become inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract conditions.

11. On issue of LOA, an agreement among the members of the JV firm (to whom the work has been awarded) has to be executed and got registered before the Registrar of Companies under Companies Act or before the Registrar / Sub-Registrar under the Registration Act, 1908. This agreement shall be submitted by the JV firm to the Department before signing the contract agreement for the work. Format of JV agreement is enclosed as Annexure K1. In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money Deposit (EMD) shall be forfeited and other penal actions due shall be taken against partners of the JV and JV. This joint venture agreement shall have, inter-alia, following clauses:

Joint and several liability – The members of the JV firm to which the contract is awarded, shall be jointly and severally liable to the employer for execution of the project in accordance with General and Special conditions of the contract. The JV members shall also be liable jointly and severally for the loss, damages causes to the Department during the course of execution of the contract or due to non-execution of the contract or part thereof.

Duration of the Joint Venture Agreement – It shall be valid during the entire currency of the contract including the period of extension if any and the maintenance period after the work is completed.

Governing Laws – The joint Venture Agreement shall in all respect be governed by and interpreted in accordance with Indian Laws.

12. **Authorised Member** : Joint Venture members shall authorize one of the members on behalf of the joint Venture firm to deal with the tender, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondence with respect to the contract would be sent only to this authorized member of the JV firm.

13. No member of the Joint Venture firm shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the employer in respect of the said tender/contract.

14. Documents to be enclosed by the JV firm along with the tender:

In case one or more of the members of the JV firm is/are partnership firm(s), following documents shall be submitted:

- (a) Notary certified copy of the Partnership Deed,

- (b) Consent of all the partners to enter into the Joint Venture Agreement on a stamp paper of Appropriate value (in original)
- (c) Power of Attorney (duly registered as per prevailing law) in favour of one of the partners to sign the MOU and JV Agreement on behalf of the partners and create liability against the firm.

In case one or more members is/are Proprietary Firm or HUF, the following documents shall be enclosed:

Affidavit on Stamp Paper of appropriate value declaring that his Concern is a Proprietary Concern and he is sole proprietor of the Concern or he is in position of “KARTA” of Hindu Undivided Family and he has the authority, power and consent given by other partners to act on behalf of HUF.

In case one or more members is/are limited companies, the following documents shall be submitted :

- (a) Notary certified copy of resolutions of the Directors of the Company, permitting the company to enter into a JV agreement, authorizing MD or one of the Directors or Managers of the Company to sign MOU, JV Agreement, such other documents required to be signed on behalf of the Company and enter into liability against the company and/or do any other act or on behalf of the company.
- (b) Copy of Memorandum and articles of Association of the Company.
- (c) Power of Attorney (duly registered as per prevailing law) by the Company authorizing the person to do/act mentioned in the para (a) above.

All the Members of the JV shall certify that they are not black listed or debarred by PWD B&R Department or any other Ministry/Department of the Govt. of India/State Govt. from participation in tenders/contract on the date of opening of bids either in their individual capacity or the JV firm or partnership firm in which they were/are members/partners.

15. Credentials & Qualifying criteria

Technical and financial eligibility of the JV firm shall be adjudged based on satisfactory fulfillment of the following criteria.

15.1 Technical eligibility criteria :

Either the JV or any one of the members of the JV firm must have satisfactorily completed in the last five previous financial years and the current financial year up to the date of opening of the tender, one similar single work for a minimum value of 50% of a advertised tender value.

OR

In case of composite works (e.g. works involving more than one distinct component such as Civil Engineering works, S&T works, Electrical works, OHE works etc. and in the case of major bridges, substructure and superstructure etc.) at least 50% of the value of each such component of similar nature should have been satisfactorily completed by the JV firm or any one of the members of the JV firm in the previous five financial years and current financial year up to the date of opening of tender.

NOTE:

Value of a completed work done by a Member in an earlier partnership firm or a JV firm shall be reckoned only to the extent of the concerned member's share in that partnership firm/JV firm for the purpose of satisfying his compliance of the above mentioned technical eligibility criteria in the tender under consideration.

Signaturer of Tenderer

15.2 Financial eligibility criteria:

The contractual payments received by the JV firm or the arithmetic sum of contractual payments received by all the members of JV firm in the previous five financial years shall be at least 250% of the estimated value of the work as mentioned in the tender.

NOTE

Contractual payment received by a Member in an earlier JV firm shall be reckoned only to the extent of the concerned member's share in that JV firm for the purpose of satisfying compliance of the above mentioned financial eligibility criteria in tender consideration.

4.5. A. To qualify for award of the contract, each bidder in its name should have in the last five years as referred to in Appendix.

(a) Average annual turnover (defined as billing for works in progress and completed in Civil engineering construction works only) over the last five years of 40% (Forty percent) of the value of contract/ contracts applied for.

i) 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 Five financial years and in the current financial year (upto the date of opening of the tender) of a value not less than **250%** of the advertised cost of work.

ii) "For judging the technical eligibility and financial capability only those works which had been executed for the **Govt. or Semi Govt. organizations** shall be considered and the tenderer will submit the certificate to this effect from the officer concerned duly signed under the official seal. It should be noted that credentials for the works executed for Private Organizations shall not be considered.

iii) The tenderer's/contractor shall submit a statement of contractual payment received during the last five financial years and current year on the prescribed proforma. The details shall be based on the form 16-A issued by employer i.e. the certificate of deduction of tax at a source under Section 203 of the Income Tax Act, 1961. The photocopies of the form 16A shall be enclosed duly attested by Notary public with seal and Notarial stamps thereon.

iv) Tenderer has to satisfy the eligibility criteria for technical capability and competence as well as for financial capacity and organizational resources.

v) If the tenderer is a JV/Consortium, each partner of JV/Consortium should have good credentials and the JV/Consortium should meet the technical and financial criteria as per the guidelines.

(b) **Satisfactorily completed (not less than 90% of contract value), as a prime contractor with Govt., Semi Govt. Deptts. such as Boards/Corporations (or as a nominated subcontractor, where the sub contract involved execution of all main items of work described in the bid document, provided further that all other qualification criteria are satisfied) at least one similar work of value not less than 50% of contract value OR two works of value not less than 33.33% of contract value.**

The similar nature of work is defined as under:-

"Civil Engineering works including bridge work of clear span of __M or more."

The following will be applicable for evaluating the eligibility.

i) Similar nature of work physically completed within the qualifying period, i.e. last five financial years and current financial year (even though the work might have commenced before the qualifying period) should only be considered in evaluating the eligibility criteria.

ii) The total value of similar nature of work completed during the qualifying period and not the payment received within qualifying alone, should be considered. In case, the final bill of similar nature of work has not been passed and final measurements have not been recorded, the total paid amount including statutory deductions is to be considered. If final measurements have been recorded and work has been completed with negative, then also the paid amount including statutory deductions is to be considered.

However, if final measurements have been recorded and work has been completed with positive variation but variation has not been sanctioned, original agreement value or last sanctioned agreement value whichever is lower should be considered for judging eligibility.

iii) In case of composite works involving combination of different works, even separate completed works of required value should be considered while evaluating the eligibility criteria.

For example, in a tender for bridge work where similar nature of work has been defined as bridge work with pile foundation and PSC superstructure, a tenderer, who had completed one bridge work with pile foundation of value at least equal to 50% of tender value and also had completed one bridge work with PSC superstructure of value at least equal to 50% of tender value should be considered as having fulfilled the eligibility criterion of having completed single similar nature of work.

The works may have been executed by the applicant as a prime contractor or as a member of joint venture. In case a project has been executed by a joint venture weightage towards experience of the project would be given to each joint venture in proportion to their participation in the joint venture.

Substantially Completed works means those works which are at least 90% completed as on the date of submission (i.e. gross value of work done up to the last date of submission is 90% or more of the original contract price) and continuing satisfactorily. For these, a certificate from the employer shall be submitted along with the application incorporating clearly the name of the work. Contract value, billing amount, date of commencement of works, satisfactory performance of the contractor and any other relevant information.

(c) **Deleted**

(d) **The contractor or his identified sub contractor should possess required valid electrical licence for executive the building electrification works and should have executed similar electrical works for a minimum amount as indicated in appendix in any one year. (valid for only ROB /RUB works)**

4.5 B. Each bidder should further demonstrate:

(a) Availability (either owned or leased or by procurement against mobilization advances) of the following key and critical equipment for this work:

NOTE: (To be included for bids valued over Rs. 5 crore)

Based on the studies, carried out by the Engineer the minimum suggested major equipment to attain the completion of works in accordance with the prescribed construction schedule are shown in the **Annexure-I**.

The bidders should, however, undertake their own studies and furnish with their bid, a detailed construction planning and methodology supported with layout & necessary drawings and calculations (detailed) as stated in clause 4.3(I) above to allow the employer to review their proposal. The numbers, types and capacities of each plant/equipment shall be shown in the proposals along with the cycle time for each operation for the given production capacity to match the requirements. If the contractual agency fails to bring any of the quality control lab equipment as mentioned in Annexure-I, the item will be arranged by Haryana PW (B&R) Department and recovery shall be made from the contractor/s bill @ double the cost of that item.

(b) Availability for this work of personnel with adequate experience as required; as per **Annexure-II**.

(c) The applicant should demonstrate that he has access to, or has available liquid assets (aggregate of working capital, cash in hand and uncommitted bank guarantees) and / or credit facilities of not less than 10 percent of the value of the contract/ contracts applied for (Construction cash –flow may be taken as 10% (Ten percent) of the estimated value of contract/ contracts)

4.5 C. To qualify for a package of contracts made up of this and other contracts for which bids are invited in the IFB, the bidder must demonstrate having experience and resources sufficient to meet the aggregate of the qualifying criteria for the individual contracts.

4.6. Sub-contractors' experience and resources shall not be taken into account in determining the bidder's compliance with the qualifying criteria except to the extent stated in 4.5 (A) above.

4.7. Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity is more than the total bid value. The available bid capacity will be calculated as under:

$$\text{Assessed Available Bid capacity} = (A * N * 3 - B)$$

where

A = Maximum value of civil engineering works executed in any one year during the last five years (updated to the price level of the year indicated in Appendix) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the works for which bids are invited.

B = Value (updated to the price level of the year indicated in Appendix) of existing commitments and on-going works to be completed during the period of completion of the works for which bids are invited.

Note: The statements showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Engineer-in-Charge, not below the rank of an Executive Engineer or equivalent.

*Delete, if not applicable.

4.8. Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- made misleading or false representations in the forms, statements and attachment submitted in the proof of the qualification requirements ; and/or.
- record of poor performance such as abandoning the works, rescinding of contract for which the reasons are attributable to the non-performance of the contractor, consistent history of litigation awarded against the Applicant or financial failure due to bankruptcy. The rescinding of contract of a joint venture on account of reasons other than non performance such as Most experienced partner of joint venture pulling out, court directions leading to breaking up of a joint venture before the start of work, which are not attributable to the poor performance of the contractor will however, not affect the qualification of the individual partners.

4.9 The bidder shall produce an affidavit that his firm has not been Black Listed by any of the Authority of India.

5. One Bid per Bidder

5.1. Each bidder shall submit only one bid for one package. A bidder who submits or participates in more than one Bid for one work (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.

6. Cost of Bidding

6.1. The bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible and liable for those costs.

7. Site Visit

7.1. The Bidder, at the Bidder's own responsibility and risk is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

BIDDING DOCUMENTS

8. Content of Bidding Documents

8.1. The set of bidding documents comprises the documents listed below and addenda issued in accordance with Clause 10:

Section	Particulars	Volume No.
	Invitation for Bids	I
1	Instructions to Bidders	
2	Qualification Information, and other forms.	
3	Conditions of Contract	
4	Contract Data	II
5	Technical Specifications	
6	Form of bid	III
7	Bill of Quantities	
8	Securities and other forms	
9	Drawings	IV
10	Documents to be furnished by bidder	V

8.2. Deleted

8.3. The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms, technical specifications, bill of quantities, Annexes and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. Pursuant to clause 26 hereof, bids which are not substantially responsive to the requirements of the Bid Documents shall be rejected.

9. Clarification of Bidding Documents

9.1. A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing or by cable (hereinafter "cable" includes telex and facsimile) at the Employer's address indicated in the invitation to bid. The Employer will respond to any request for clarification which he received earlier than 15 days prior to the deadline for submission of bids. Copies of the Employer's response will be forwarded to all purchasers of the bidding documents, including a description of the enquiry but without identifying its source.

9.2. Pre-bid meeting

9.2.1. The bidder or his official representative is invited to attend a pre-bid meeting which will take place at the address , venue , time and date as indicated in appendix.

9.2.2. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

9.2.3. The bidder is requested to submit any questions in writing or by cable to reach the Employer not later than one week before the meeting.

9.2.4. Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be placed on departmental website. Any modification of the bidding documents listed in Sub-Clause 8.1 which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 10 and not through the minutes of the pre-bid meeting and a copy placed on the departmental website.

9.2.5. Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

10. Amendment of Bidding Documents

10.1. Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda on the website.

10.2. Any addendum thus issued shall be part of the bidding documents and shall be communicated by placing on the website. Prospective bidders shall acknowledge receipt of each addendum in writing or by e-mail.

10.3. To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may, at his discretion, extend as necessary the deadline for submission of bids, in accordance with Sub-Clause 20.2 below.

C. PREPARATION OF BIDS

11. Language of the Bid

11.1. All documents relating to the bid shall be in the English language.

12. Documents Comprising the Bid.

12.1. The bid to be submitted by the bidder as Volume V of the bid document (refer Clause 8.1) shall be in two separate parts:

Part I shall be named "Technical Bid" and shall comprise

- (i) Bid Security in accordance with Clause 16 and in the form specified in Section 8.
- (ii) Qualification Information and supporting documents as specified in Section 2
- iii) Certificates, undertakings, affidavits as specified in Section 2
- iv) Deleted
- v) Undertaking that the bid shall remain valid for the period specified in Clause 15.1
- vi) Deleted.

Part II shall be named "Financial Bid" and shall comprise

- (i) Form of Bid as specified in Section 6
- (ii) Priced Bill of Quantities for items specified in Section 7

Both bids will be submitted online in accordance with Clause 19.

12.2. Following documents, which are not submitted with the bid, will be deemed to be part of the bid.

Section	Particulars	Volume No.
1	Invitation for Bids(IFB)	
2	Instructions to Bidders	Volume I
3	Conditions of Contract	
4	Contract Data	
5	Specifications	Volume II
9	Drawings	Volume IV

13. Bid Prices.

13.1. The contract shall be for the whole works as described in Sub-Clause 1.1, based on the priced Bill of Quantities submitted by the Bidder.

13.2. Deleted

13.3. All duties, taxes and other levies payable by the contractor under the contract, or for any other cause shall be included in the rates, prices and total Bid Price submitted by the Bidder.

13.4. The rates and prices quoted by the bidder are subject to adjustment during the performance of the Contract in accordance with the provision of Clause 47 of the Conditions of Contract.

14. Currencies of Bid and Payment

14.1. The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees. All payments shall be made in Indian Rupees.

15. Bid Validity.

15.1. Bids shall remain valid for a period not less than **120 days** after the deadline date for bid submission. A bid valid for a shorter period shall be rejected by the Employer as non-responsive and earnest money will be forfeited. In case of discrepancy in bid validity period between that given in the undertaking pursuant to Clause 12.1 (v) and the Form of Bid submitted by the bidder, the latter shall be deemed to stand corrected in accordance with the former and the bidder has to provide for any additional security that is required.

15.2. In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders responses shall be made in writing. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for a period of the extension, and in compliance with Clause 16 in all respects.

16. Bid Security

16.1. The Bidder shall furnish, as part of his Bid, a Bid security in the amount as shown in column 4 of the table of IFB for this particular work. This bid security shall be in favour of Employer/representative Executive Engineer, as named in Appendix and may be in one of the following forms:

a. Receipt in challan of cash deposit in the Govt. Treasury in Haryana.

- b. Deposit-at-call Receipt from any scheduled Indian Bank or a foreign Bank located in India and approved by the Reserve Bank of India.
 - c. Indian Post Office/ National Savings Certificate duly endorsed by the competent postal authority in India.
 - d. Bank Guarantee from any scheduled Indian bank, in the format given in Volume III.
 - e. Fixed Deposit Receipt, a certified cheque or an irrevocable letter of credit, issued by any Scheduled Indian Bank or a foreign Bank approved by the Reserve Bank of India.
- 16.2. Bank guarantees (and other instruments having fixed validity) issued as surety for the bid shall be valid for 45 days beyond the validity of the bid.
- 16.3. Any bid not accompanied by an acceptable Bid Security and not secured as indicated in Sub-Clauses 16.1 and 16.2 above shall be rejected by the Employer as non-responsive.
- 16.4. The Bid Security of the unsuccessful bidders will be returned within 28 days of the end of the bid validity period specified in Sub-Clause 15.1.
- 16.5. The Bid Security of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required Performance Security.
- 16.6. The Bid Security may be forfeited
- (a) if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;
 - (b) in the case of a successful Bidder, if the Bidder fails within the specified time limit to
 - (i) sign the Agreement; or
 - (ii) furnish the required Performance Security.
 - (c) If the bidder modifies his bid at his own after opening of tenders through e-tendering during the period of bid validity.

17. Alternative Proposals by Bidders

17.1. Bidders shall submit offers that fully comply with the requirements of the bidding documents, including the conditions of contract (including mobilization advance or time for completion), basic technical design as indicated in the drawing and specifications. Conditional offer or alternative offers will not be considered further in the process of tender evaluation.

18. Format and Signing of Bid

18.1 Deleted.

18.2 Deleted.

18.3 Deleted.

D. SUBMISSION OF BIDS

19. Guide lines for E-Tendering

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

19.2 Registration of the Contractors on the Electronic Tendering System of Public Works Department (B & R), Government of Haryana portal <http://harvanapmgsy.etenders.in>:

All the Contractors (registered / intending to registered with Public Works Department (B&R), intending participate in the tender processed online are required to get registered on the Electronic tendering Signaturer of Tenderer

on the website <http://harvanapmgsy.etenders.in> in order to participate in the tenders floated using the Electronic system.

The Contractors registered with other Departments electronic systems who are also eligible to participate in Public Works Department (B & R), Government of Haryana tenders are also required to be registered on the Electronic Tendering System in **GENERAL** category.

For more details, please see the information in Registration Info link on the Home Page.

19.3 Obtaining a Digital Certificate:

The Bids required to be submitted online should be 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, authorized by the Controller of Certifying Authorities, Government of India.

A Digital Certificate is issued upon receipt of mandatory identity proofs. Only upon the receipt of the required documents, a Digital Certificate can be issued.

The registered Contractors may obtain Class – II B Digital Certificates from any certifying authority or Sub certifying authority authorised by the controller of certifying authorities or may obtain information and application format and documents required to issue of digital certificate from.

1. NexTenders (India) Pvt. Ltd.,
YUCHIT, Juhu Tara Road
Mumbai-400 049 email; support@nextenters.com
2. The registered contractors may obtain the digital certificates form any other certifying authority or sub-certifying authority authorised by the controller of certifying authorities , govt. of India.

Bid for a particular Tender may be submitted only using the Digital Certificate, which is used to encrypt the data and sign the hash during the stage of Bid Preparation and Hash Submission. In case, during the process of a particular Tender, the Authorised User loses his / her Digital Certificate (i.e. due to virus attack, hardware problem, operating system problem); he / she may not be able to submit the Bid online. Hence, the Authorised User is advised to back up his / her Digital Certificate and keep the copies at safe place under proper security to be used in case of emergencies.

In case of online tendering, if the Digital Certificate issued to the Authorised 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 to that User. A Firm has to authorize a specific Individual via an Authorisation Certificate / Letter signed by the majority of the Partners to use the Digital Certificate as per Indian Information Technology Act 2000. Unless the Digital Certificate is revoked, it will be assumed to represent adequate authority of the Authority User to bid on behalf of the Firm for the Tenders processed by the Public Works Department (B & R), Government of Haryana as per Information Technology Act 2000. The Digital Signature of this Authorized User will be binding on the Firm. It shall be the responsibility of Partners of the Firm to inform the Certifying Authority or Sub Certifying Authority, if the Authorized User changes, and apply for a fresh Digital Certificate and issue an Authorization Certificate for the new Authorised User. The procedure for application of a Digital Certificate will remain the same for the new Authorized User.

The same procedure holds true for the Authorized Users in a Private / Public Limited Company. In this case, the Authorisation Certificate will have to be signed by the Directors of the Company.

19.4 Opening of an Electronic Payment Account:

For purchasing the Tender documents online, Contractors are required to pay the Tender Document Fees online, using the electronic payments gateway service as mentioned in the NIT.

Following modes of electronic payments are accepted on the electronic tendering system.

a) **Credit cards**- Electronic Credit Card Transactions through the following Credit Card types are supported; Master Card/ VISA/ American Express/ Diners club International/ JCB Cards/ Citibank E-Cards

b) **Internet Banking** – Electronic internet banking transactions through Internet banking accounts of the following Banks are supported. HDFC Bank/ Citibank/ ICICI Bank/ IDBI Bank/ UTI Bank/ Oriental bank of commerce/Global Trust Bank/ Federal Bank/ Centurion Bank of Punjab Ltd/ Indusind Bank/ Kotak Mahindra Bank/ Punjab National Bank

19.5 Set up of machine

In order to operate on the Electronic Tender management system, the User's machine is required to be set up. A Help File on setting up of the Computer System can be obtained from NexTenders (India) Pvt. Ltd. or downloaded from the Home Page of the website '<http://haryanapmgsy.etenders.in>'

19.6 Online Viewing of Detailed Notice Inviting Tenders:

The Contractors can view the Detailed Notice Inviting Tenders and the Time Schedule (Key Dates) for all the packages floated using the Electronic.

19.7 Purchase of Tender Documents :

a) Online purchase/Download of tender document : The tender documents can only be downloaded from the electronic tendering website . '<http://haryanapmgsy.etenders.in>' after logging in with a valid username and password or from the Haryana PWD (B&R) Website . '<http://haryanapwd-bandr.org>. is to be noted that it is mandatory that the tender document is downloaded from the electronic tendering website to be able to submit electronic bids . the payment of the tender document fee has to be made only if the bid is being submitted. The last date of the submission of the tender document fee is as indicated in notice inviting tenders.

19.8 Clarification of bidding documents and pre-bid meeting

19.9 In case online query processing facility of online bidding is functional.

Prospective bidder should notify the Employer through the query processing facility available online up to the date and time indicated in the Notice Inviting Tender. In such case, the copies of the Employer's response will be displayed on –line including a description of the enquiry, but without identifying its source.

Prospective bidders can participate in the pre-bid meeting using the query processing facility available on-line

Prospective bidders can use the query processing facility available on-line to do so but not later than one week before the meeting.

Response given will be displayed online without delay.

19.10 Submission of Bid Seal (Hash) of Online Bids:

Submission of bids will be preceded by submission of the digitally signed bid seal(Hash) as stated in the tender time schedule (key dates) published in the NIT.

The information related to bids should be filled in or uploaded in the available templates under each envelope. After filling templates /uploading documents online, the hash of each envelope is required to be generated and digitally signed by a digital certificate of the person duly authorised to sign on behalf of the bidder.

19.11 Generation of Super Hash:

After the prescribed time of submission of Bid Seals (Hashes) by the Contractors has lapsed, the bid round will be closed and a digitally signed Tender Super Hash will be generated by the authorised Haryana PWD (B&R) Official . This is equivalent to sealing the Tender Box.

19.12 Submission of actual online Bids:

Contractors have to submit their encrypted Bids online and upload the relevant documents for which they generated the respective Hashes during the stage of Bid Preparation and Hash Submission after the generation of Super Hash within the date and time as stated in the Notice Inviting Tenders (Key Dates). The electronic Bids of only the Contractors who have submitted their Bid Seals (Hashes) within the stipulated time, as per the Tender Time Schedule (Key Dates), will be accepted by the Electronic Tendering System. A Contractor who does not submit his Bid Seals (Hashes) within the stipulated time will not be allowed to submit his Bid.

Note :- The bidder shall fill/upload the information related to bids in the available templates under two separate envelopes marked “TI and “CI” after filling templates/uploading documents online, the hash of each envelope is required to be generated and to be digitally signed. Re-encryption and submission of bid data as indicated in the Notice Inviting tender. In case of online Bids, no information related to “Financial Bid” shall be accepted manually.

19.13 Submission of cost of bid documents and bid security:

Contractor has to submit cost of bid documents mandatorily online through e-tendering website. Bid security in the form as prescribed in clause 16 of section-1(ITB) of bid document is to be delivered in a sealed envelope to the officer well in stipulated time as prescribed in list of important dates.

19.14 Opening of Electronic Bids:

The online bid data will be then opened through the website '<http://haryanapmgsy.etenders.in>' The hashes of each bid will be matched with the hash generated and submitted during the stage. “Bid preparation and Hash submission” In the event of a mismatch the bid in question will be liable for a due process of verification by Haryana PWD (B&R).

19.15 Key Dates

The contractor are strictly advised to follow dates and times as indicated in the notice inviting tenders . The date and time as indicated in the top right of the webpage is the system time and will be binding on all contractors. 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 time of the stage as defined in the Notice Inviting Tenders.

19.16. Online query system is not functional for this package.

19.17. In case there is any contradiction in tender process then instruction contained guidelines to e-tendering will prevail.

20. Deadline for submission of bids

20.1 Complete Bids (including Technical and Financial) must be received by the Employer at the address specified above not later than the date indicated in appendix. In the event of the specified date for the submission of bids declared a holiday for the Employer, the Bids will be received upto the appointed time on the next working day.

20.2 The Employer may extend the deadline for submission of bids by issuing an amendment in accordance will Clause 10, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

21. Late Bids:

“If the subsequent offer even from a non-tender (received within one week of the previous offer and before the decision of the contract) is not just marginally but significantly favourable to the Govt. (to the extent of 5% of the lowest tender amount in case of works costing more than Rs. 5.00 Cr., 10% in case of work more than Rs. 1.00 Cr. but less than Rs. Rs. 5.00 Cr., 20% for in case of work more than Rs. 5.00 Lacs but less than Rs. 1.00 Cr. and 30% in case of works less than Rs. 5.00 lacs or any other limits as decided by Govt. from time to time) then the subsequent offer can be considered provided the bidder deposits the bid security and unconditional bank guarantee for the difference of the amount between the offer of the lowest agency and the subsequent fresh offer. In the previous notice fresh sealed bids shall be invited, with special invitation to the previous participants including the subsequent bidder mentioned above, but with the stipulation that the subsequent bidder shall not bid higher than his previous offer, otherwise his bid security and bank guarantee shall be forfeited. Tender shall be allotted to the lowest valid bid received.”

22. Deleted

E. BID OPENING AND EVALUATION

23. Bid Opening.

23.1. The Employer will open all the Bids received (except those received late), in the presence of the Bidders or their representatives who choose to attend at time, date and the place specified in Appendix. In the event of the specified date of Bid opening being declared a holiday, the Bids will be opened at the appointed time and location on the next working day.

23.2. Deleted.

23.3. The envelope containing “Technical Bid” shall be opened on the internet. The amount, form and validity of the cost of bid document and bid security furnished with each bid will be announced. If the cost of bid document and bid security furnished does not confirm to the amount and validity period as specified in the Invitation for bid (ref. Column 4 and 5), and has not been furnished in the form specified in the Clause 16, the remaining technical bid and the financial bid will not be opened on internet.

23.4. (i) Subject to confirmation of the bid security by the issuing Bank, the bids accompanied with valid bid security will be taken up for evaluation with respect to the Qualification Information and other information furnished in Part I of the bid pursuant to Clause 12.1.

(ii) After receipt of confirmation of the bid security, the bidder will be asked in writing (usually within 10 days of opening of the Technical Bid) to clarify or modify his technical bid, if necessary, with respect to any rectifiable defects.

(iii) The bidders will respond in not more than 7 days of issue of the clarification letter, which will also indicate the date, time and venue of opening of the Financial Bid (usually on the 21st day of opening of the Technical Bid)

(iv) Immediately (usually within 3 or 4 days), on receipt of these clarifications the Evaluation Committee will finalize the list of responsive bidders whose financial bids are eligible for consideration.

23.5. **Deleted.**

23.6. At the time of opening of “Financial Bid”, the names of the bidders were found responsive in accordance with Clause 23.4(iv) will be announced. The bids of only these bidders will be opened. The remaining bids will be returned to the bidders unopened. The responsive Bidders’ names, the Bid prices, the total amount of each bid, any discounts, Bid Modifications and withdrawals, and such other details as the Employer may consider appropriate, will be announced at the time of opening. Any Bid price or discount, which is not read out and recorded will not be taken into account in Financial Bid Evaluation.

23.7. In case bids are invited in more than one package, the order for opening of the “Financial Bid” shall be that in which they appear in the “Invitation For Bid”.

23.8. The Employer shall prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Sub-Clause 23.6.

23.9 If the agency submits financial bid through E-tendering but fails to submit either bid security or the technical bid or both than the agency will be debarred from further tendering in Haryana PWD B&R for one year.

24. **Process to be Confidential.**

24.1. Information relating to the examination, clarification, evaluation, and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by a Bidder to influence the Employer’s processing of Bids or award decisions may result in the rejection of his Bid.

25. **Clarification of Financial Bids.**

25.1. To assist in the examination, evaluation, and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the Bid shall be sought, offered, or permitted.

25.2. Subject to sub-clause 25.1, no Bidder shall contact the Employer on any matter relating to his bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.

25.3. Any effort by the Bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidder's bid.

26. Examination of Bids and Determination of Responsiveness

26.1. During the detailed evaluation of "Technical Bid", the Employer will determine whether each Bid (a) meets the eligibility criteria defined in Clause 3 & 4; (b) has been properly signed; (c) is accompanied by the required securities and; (d) is substantially responsive to the requirements of the Bidding documents. During the detailed evaluation of the "Financial Bid", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications, and drawings.

26.2. A substantially responsive "Financial Bid" is one which conforms to all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Bidding documents, the Employer's rights or the Bidder's obligations under the Contract; or (c) whose rectification would effect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

26.3. If a "Financial Bid" is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

27. Correction of Errors.

27.1. "Financial Bids" determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

(a) if there is discrepancy in the unit of any item of uploaded BOQ and MORT&H specification/ data book and HSR then the unit provided in MORT&H /data book and HSR will govern. The rate quoted will be applicable for the unit as per MORT&H /data book and HSR.

(b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.

27.2. The amount stated in the "Financial Bid" will be corrected by the Employer in accordance with the above procedure and the bid amount adjusted with the concurrence of the Bidder in the following manner:

(a) If the Bid price increases as a result of these corrections, the amount as stated in the bid will be the 'bid price' and the increase will be treated as rebate;

(b) If the Bid price decreases as a result of these corrections, the decreased amount will be treated as the 'bid price'.

Such adjusted bid price shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount the Bid will be rejected, and the Bid security may be forfeited in accordance with Sub-Clause 16.6 (b).

28. Deleted.

29. Evaluation and Comparison of Financial Bids.

29.1. The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Sub-Clause 26.2.

29.2. In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:

- (a) making an appropriate adjustments for any other acceptable variations, deviations; and
- (b) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with Sub-Clause 23.6.

29.3. The Employer reserves the right to accept or reject any variation or deviation. Variations and deviations and other factors, which are in excess of the requirements of the Bidding documents or otherwise result in unsolicited benefits for the Employer shall not be taken into account in Bid evaluation.

29.4. The estimated effect of the price adjustment conditions under Clause 47 of the *Conditions of Contract*, during the period of implementation of the Contract, will not be taken into account in Bid evaluation.

29.5. If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work to be performed under the contract, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the performance security set forth in Clause 34 be increased at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.

29.6. A bid which contains several items in the Bill of Quantities which are unrealistically prices low and which cannot be substantiated satisfactorily by the bidder, may be rejected as non-responsive.

30. Deleted.

F. AWARD OF CONTRACT

31. Award Criteria.

31.1 Subject to Clause 32, the Employer will award the Contract to the Bidder whose Bid has been determined

- (i) to be substantially responsive to the Bidding documents and who has offered the lowest evaluated Bid Price; and
- (ii) to be within the available bid capacity adjusted to account for his bid price which is evaluated the lowest in any of the packages opened earlier than the one under consideration.

In no case, the contract shall be awarded to any bidder whose available bid capacity is less than the evaluated bid price, even if the said bid is the lowest evaluated bid. The contract will in such cases be awarded to the next lowest bidder at his evaluated bid price.

32. Employer's Right to Accept any Bid and to Reject any or all Bids.

32.1. Notwithstanding Clause 31, the Employer reserves the right to accept or reject any Bid, and to cancel the Bidding process and reject all Bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Employer's action.

33. Notification of Award and Signing of Agreement.

33.1. The Bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration for the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the *Conditions of Contract* called the “Letter of Acceptance”) will state the sum that the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed in the Contract (hereinafter and in the Contract called the “Contract Price”).

33.2. The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause 34.

33.3. The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and sent to the successful Bidder, within 28 days following the notification of award along with the Letter of Acceptance. Within 21 days of receipt, the successful Bidder will sign the Agreement and deliver it to the Employer.

33.4. Upon the furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

34. Performance Security.

34.1. Within 21 days of receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer a Performance Security in any of the forms given below for an amount equivalent to 5% of the Contract price plus additional security for unbalanced Bids in accordance with Clause 29.5 of ITB and Clause 52 of Conditions of Contract. The amount of performance security shall be reduce to 2% of contract price after successful completion of defect liability cum maintenance period:

- a bank guarantee in the from given in Section 8; or
- certified Cheque/Bank Draft as indicated in Appendix.

34.2. If the performance security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued either (a) at the Bidder’s option, by a Nationalized/Scheduled Indian Bank or (b) by a foreign bank located in India and acceptable to the Employer.

34.3. Failure of the successful Bidder to comply with the requirements of Sub-Clause 34.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

34.4. Initially, the performance guarantee will be valid upto end of the defects liability period plus 60 days or as prescribed in the contract data. In case the time of completion is extended, the validity of performance security shall be correspondingly extended. It carries no interest and is returned to the contractor after the date specified in the contract.

35. Advance Payment and Security.

35.1. The Employer will provide an Advance Payment on the Contract Price as stipulated in the Conditions of Contract, subject to maximum amount, as stated in the Contract Data.

36. Deleted.

37. Corrupt or Fraudulent Practices.

37.1. The Employer will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question and will

declare the firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract with Government of India/State PWD and any other agencies, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for the contractor, or in execution.

37.2. Furthermore, Bidders shall be aware of the provision stated in Sub-Clause 59.2 of the Conditions of Contract.

FORMAT FOR JOINT VENTURE MEMORANDUM OF UNDERSTANDING/AGREEMENT

THIS JOINT VENTURE MEMORANDUM OF UNDERSTANDING (MOU)/AGREEMENT EXECUTED AT ON THIS DAY OF 2008 BETWEEN M/s Registered office at as the first party and M/s Registered office at as the Second party as third party. (The expression and words of the first and second and third party shall mean and include their heirs successors, assigns, nominees execution, administrators and legal representatives respectively.)

WHEREAS the parties herein above mentioned are desirous of entering into a Joint Venture for carrying on Engineering and/or contract works, in connection with and other works mentioned in Tender Notice No. Dated of PWD B&R Department or any other work or works, as mutually decided between the parties to this Joint Venture.

WHEREAS all the parties are desirous of recording the terms and conditions of this Joint Venture to avoid future disputes.

NOW THIS MoU/AGREEMENT WITNESSTH AS UNDER:

1. That in and under this Joint Venture agreement the work will be done jointly by the First Party and Second Party in the name and style of M/s M/s and M/s.....).

2. This all the parties shall be legally liable, severally and or jointly responsible for the satisfactory/successful execution/completion of the work in all respects and in accordance with terms and conditions of the contract.

3. That the role of each constituent of the said Joint Venture in details shall be as under:-

The first party shall be responsible for

The second party shall be responsible for

The third party shall be responsible for

4. The share of profit and loss of each constituent of the said Joint venture shall be as under:-

5. That all the parties of this Joint Venture shall depute their experienced staff as committed commensuration with their role and responsibility and as required for the successful completion of the works in close consultation with each other.

6. That the investment required for the works under this Joint Venture shall be brought in by the parties as agreed to between them from time to time.

7. That all the Bank guarantee shall be furnished jointly by the parties in the name of Joint Venture.

8. That the party number _____ to this Joint Venture shall be the prime (lead) contractor and will be responsible for timely completion of work and to coordinate with the Department to receive payments and also to make all correspondence on behalf of this Consortium/Joint Venture.

9. That all the above noted parties i.e. _____ not to make any change in the agreement without prior written consent of the competent authority of the department.

NOW THE PARTIES HAVE JOINED HANDS TO FORM THIS JOINT VENTURE ON THIS _____ DAY OF _____ TWO THOUSAND WITH REFERENCE TO AND IN CONFIRMATION OF THEIR DISCUSSIONS AND UNDERSTANDING BROUGHT ON RECORD ON _____.

IN WITNESS THEREOF ALL/BOTH THE ABOVE NAMED PARTIES HAVE SET THEIR RESPECTIVE HANDS ON THIS JOINT VENTURE AGREEMENT ON THE DAY, MONTH AND YEAR FIRST ABOVE MENTIONED IN THE PRESENCE OF THE FOLLOWING WITNESS;

WITNESSES:

1.

FIRST PARTY

2.

SECOND PARTY

**Clause Reference
with respect to
Section-I.**

1. Name of the Employer is Superintending Engineer, Circle,
PWD B&R Branch, [C1.1.1]
2. The last five years

2008-2009
2009-2010
2010-2011
2011-2012
2012-2013
3. This annual financial turn over amount is = Rs..... . [C1.4.5A(a)]
(In words)
4. Value of one work is Rs. [C1.4.5A(b)]
In words (.....) or
Value of two work is Rs. [C1.4.5A(b)]
In words (.....) or
5. Deleted
6. The cost of electrical work is Rs..... [C1.4.5A(d)]
(In words)
7. The cost of water supply / sanitary works is Rs. [C1.4.5A(e)]
..... (in words.)
8. Liquid assets and/or availability of credit facilities is Rs. [C1.4.5B(c)]
(In words)
9. Price level of the financial year [C1.4.7]
10. The Pre-bid meeting will take place in the Superintending Engineer, Circle,
PWD B&R Branch, on ___ at _____ Hours.
11. The technical bid will be opened in the _____

12. Deleted
13. Deleted
14. The bid should be submitted through e-tendering latest by [C1.20.1(a)]

_____ (date and time)
15. The bid will be opened in the o/o Superintending Engineer, Circle,
PWD B&R Branch, _____ [C1.23.1]

on _____ (time and date)

16. The Bank Guarantee **in favour of Executive Engineer, Provincial Division, PWD B&R Branch, payable at** [C1.34.1]
17. Deleted.
18. Escalation factors (for the cost of works executed and financial figure to a common base value for works completed)

<u>Year before</u>	<u>Multiply factor</u>
One	1.10
Two	1.21
Three	1.33
Four	1.46
Five	1.61

**List of Key Plant & Equipment to be deployed on Contract Work
{Reference Cl.4.5 (B)(a)}**

Sr. No.	Type of Equipment.	Maximum Age as on	Upto Rs.50 lacs	More than 50 lacs upto 1 Crore.	Upto Rs.5 Crore	More than Rs.5 Crore upto 20 Crore	More than Rs.20 Crore upto 50 Crore	More than Rs.50 Crore and above.
1	Tipper Trucks	5-7	*	*	6	6	8	10
2	Motor Grader	5	*	*	2	2	3	2
3	Dozer	5	*	*	1	1	1	2
4	Front end Loader	5	*	*	2	2	2	2
5	Smooth Wheeled Roller	5	*	*	2	2	3	2
6	Vibratory Roller	5	*	*	2	2	2	3
7	Mot Mix Plant with Electronic Controls (Minimum 8200 TPH Capacity)	5	*	*	1	1	1	2
8	Paver Finisher with Electronic Sensor	5	*	*	1	1	1	2
9	Water Tanker	5	*	*	3	3	4	5
10	Bitumen Sprayer	5	*	*	-7	1	1	2
11	Tandem Roller	5	*	*	1	1	1	1
12	Concrete Mixers with Integral Weigh Batching facility.	5	*	*	2	2	1	2
13	Concrete Batching and Mixing Plant (Minimum Capacity – 15m ³ / hour)	5	*	*	-	1	1	1
14	Concrete paver capable of paving 7.5m width in one single pass including all accessories. Such as automatic dowel bar inserter, integral vibratory system and electronic sensor ancillary equipment for applying curing compound joint cutting etc.	5	*	*	-	-	-	1
15	Concrete Batching and Mixing Plant with automatic control (minimum 100 Cum / hour).	5	*	*	-	-	1	1
16	Concrete pump (30 cum/ hour minimum matching with the capacity of concrete batching plant)	-	-	-	-	-	1	2
17	Concrete Transit Mixer	-	-	-	-	-	4	4
18	Crane alongwith other hoisting arrangement (75 Ton minimum)	-	-	-	-	-	1	2
19	Hydraulic drilling rig of suitable capacity	-	-	-	-	-	1	2
20	Grab and winch	-	-	-	-	-	1	1
21	Vibratory compactors (8-10 Ton)	-	-	-	-	-	1	2
22	Hydra	-	-	-	-	-	1	1
23	Compressor	-	-	-	-	-	1	2
24	Bar bending machine	-	-	-	-	-	1	2
25	Pug mill	-	-	-	-	-	1	2
		Total:			24	25	43	58

List of Key Personnel to be deployed on Contract Work

[Reference CI. 4.5 (B) (b)]

Sr. No.	Personnel	Qualification	LOT size					
			Upto Rs.50 lacs	More than 50 lacs upto 1 Crore.	Upto Rs.5 Crore	More than Rs.5 Crore upto 20 Crore	More than Rs.20 Crore upto 50 Crore	More than Rs.50 Crore and above.
1	Project Manager	BE Civil + 10 Years Exp.	-	1 No.	1 No.	1 No.	1 No.	1 No.
2	Site Engineer	BE Civil + 3 Years Exp.	-	1 No.	1 No.	2 Nos.	4 Nos.	6 Nos.
3	Plant Engineer	BE Mech + 3 Years Exp. Or Dip. Mech. + 7 Years Exp.	-	1 No.	1 No.	1 No.	1 No.	2 Nos.
4	Quantity surveyor	BE Civil + 7 Years Exp. Or Dip. Civil + 7 Years Exp.	1 No.	1 No.	1 No.	1 No.	1 No.	2 Nos.
5	Soil & Material Engineer.	BE Civil + 7 Years Exp. Or Dip. Mech. + 7 Years Exp.	-	1 No.	1 No.	1 No.	1 No.	1 No.
	Total:		1 No.	5 Nos.	5 Nos.	6 Nos.	8 Nos.	12 Nos.

- * Technical staff should be available at site whenever required by the Engineer-in-charge or his authorized representative to take instructions. In case the contractor fail to employ the Technical staff as aforesaid, he shall be liable to pay Rs. for each month of default of part thereof in case each Graduate Engineer and Rs. for each month of default or part thereof in case of each qualified diploma holder.
- * The contractor shall be responsible to produce to relevant bio-data of Degree/Diploma of the staff employed by him for the scrutiny of the Department and also furnish a photo-state copy thereof for the record. Railway reserve the right to scrutinize the account bills of the contractor to ascertain as to whether the qualified staff has been actually employed by him and is paid for.
- * The decision of the Engineer-in-charge, for the Technical staff not employed by the contractor shall be final and binding upon the contractor.

SECTION 2
QUALIFICATION INFORMATION

QUALIFICATION INFORMATION

The information to be filled in by the Bidder in the following pages will be used for purposes of post qualification as provided for in clause 4 of the Instruction to Bidders. This information will not be incorporated in the Contract.

1. For Bidders

1.1. Constitution or legal status of Bidders

1. Full name of contractor/s construction firm and year of establishment.
2. Registered Head Office Address.
3. Branch Office in India.
4. Address on which correspondence regarding this tender should be done.
5. Constitution of firm, give full details including name of partners/executives/power of attorney/holders etc.
6. Particulars of registrations with Government/Semi Govt. Organization, Public Sectors Undertakings and local bodies etc.

..... Signature of the Tenderer/s.

1.2 Total value of Civil Engineering construction 20____20_____ ***
work performed in the last five years** 20____20_____
(in Rs. Million) 20____20_____

1.3.1. Work performed as prime contractor, work performed in the past as a nominated subcontractor will also be considered provided the sub-contract involved execution of all main items of work described in the bid document, provided further that all other qualification criteria are satisfied(in the same name) on works of a similar nature over the last five years.**

Project Name	Name of the Employer*	Description of work	Contract No.	Value of Contract (Rs. Crore)	Date of issue of work order	Stipulated period of completion	Actual date of compl- etion*	Remarks explaining reasons for delay & work Completed

* Attach certificate(s) from the Engineers(s)-in charge

** immediately preceding the financial year in which bids are received

***Attach certificate from Chartered Accountant.

1.3.2 Quantities of work executed as prime contractor, work performed in the past as a nominated sub-contractor, will also be considered provided the sub-contract involved execution of all main items of work described in the bid document, provided further that all other qualification criteria are satisfied (in the same name and style) in the last five years:**

Year	Name of the work	Name of the Employer*	Quantity of work performed (cum)@						Remarks* (indicate contract Ref)
			Cement concrete (including RCC & PCC)	Masonry	Earth work	WBM	WMM	Bituminous work	
20...-20...									
20...-20...									
20...-20...									
20...-20...									
20...-20...									

1.4. Information on Bid Capacity (Works for which bids have been submitted and works which are yet to be completed) as on the date of this bid.

(A) Existing commitments and on-going works:

Description of work	Place & State	Contract No.	Name & Address of Employer	Value of Contract (Rs. Cr.)	Stipulated Period of Completion	Value of works* remaining to be completed (Rs. Cr.)	Anticipated date of completion
1	2	3	4	5	6	7	8

(B) Works for which bids already submitted:

Description of works	Place & State	Name & Address of Employer	Estimated value of works (Rs. Cr.)	Stipulated period of completion	Date when decision is expected	Remarks, if any
1	2	3	4	5	6	7

1.6 Qualifications and experience of key personal required for administration and execution of the Contract [Ref. Clause 4.5(B)(b)] Attach biographical data. Refer also to Sub Clause 4.3(e) of instructions to Bidders and Sub clause 9.1 of the Conditions of Contract.

Position	Name	Qualification	Year of Experience (General)	Year of Experience in the proposed position
Project Manager				
Etc.				

1.7 Proposed sub-contracts and firms involved [refer ITB clause 4.3(k)]

Sanctions of work	Value of Sub-contract	Sub-contractor (Name & Address)	Experience in similar work

Attach copies of certificates on possession of valid license for executing water supply/sanitary work/building electrification work [Reference Clause 4.5(d) & Clause 4.5(e)].

*1.8. Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports (in case of companies/corporation), etc. List them below and attach copies.

1.9. Evidence of access to financial resources to meet the qualifications requirements: cash in hand, lines of credit, etc. List them below and attach copies of support documents.

1.10. Name, address, and telephone, telex and fax numbers of the Bidders' bankers who may provide references if contacted by the Employer.

1.11. Information on litigation history in which the Bidder is involved.

Other Party(ies)	Employer	Cause of Dispute	Amount involved	Remarks showing Present Status

1.12 Statement of compliance under the requirements of Sub –Clause 3.2 of the instructions to Bidders.(Name of consultant engaged for project preparation is **.....)

1.13. Proposed work method and schedule. The Bidders should attach descriptions, drawings and charts as necessary to comply with the requirements of the Bidding documents.[Refer ITB Clause 4.1 & 4.3.(1)]

1.14. Programme

1.15. Quality Assurance Programme

2. Deleted

3. Additional Requirements

3.1. Bidders should provide any additional information required to fulfill the requirements of Clause 4 of the Instructions to the Bidders, if applicable.

(i) **Affidavit**

(ii) **Undertaking**

(iii) **Deleted.**

(iv) **Deleted.**

(v) **Deleted.**

* **Delete, if prequalification, has been carried out**

** **Fill the Name of Consultant**

**SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR
AVILABILITY OF CREDIT FACILITIES**

(CLAUSE 4.2 (i) OF ITB)

BANK CERTIFICATE

This is to certify that M/s. _____ is a reputed company with a good financial standing.

If the contract for the work, namely _____ is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. _____ to meet their working capital requirements for executing the above contract during the contract period.

(Signature)

Name of Bank

Senior Bank Manager

Address of the Bank

AFFIDAVIT

1. I, the undersigned, do hereby certify that all the statements made in the required attachment are true and correct.
2. The undersigned also hereby certifies that neither our firm M/s _____
_____ have abandoned any work on National Highways in India nor any contract awarded to us for such works have been rescinded, during last five years prior to the date of this bid.
3. The undersigned hereby authorize(s) and request(s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the Department to verify this statement or regarding my (our) competence and general reputation.
4. The undersigned understand and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the Department/Project implementing agency.

(Signed by an Authorized Officer of the Firm)

Title of Officer

Name of Firm

DATE

UNDERTAKING

I, the undersigned do hereby undertake that our firm M/s _____
_____ would invest a minimum cash up to 25% of the value of the work during
implementation of the Contract.

(Signed by an Authorized Officer of the Firm)

Title of Officer

Name of Firm

DATE

SECTION 3
CONDITIONS OF CONTRACT

CONDITIONS OF CONTRACT

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CONDITIONS OF CONTRACT

A. GENERAL

1. Definitions

1.1. Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.

Bill of Quantities means the priced and completed Bill of Quantities forming part of the Bid.

The **Completion Date** is the date of completion of the Works as certified by the Engineer in accordance with Sub-clause 55.1.

The **contract** is the contract between the Employer and Contractor to execute, complete and maintain the works till the completion of Defects Liability Period. It consists of the documents listed in Clause 2.3 below

The **Contract Data** defines the documents and other information which comprise the Contract.

The **Contractor** is a person or corporate body whose Bid to carry out the Works has been accepted by the Employer.

The **Contractor/s Bid** is the completed Bidding document submitted by the contractor to the employer and includes Technical and Financial bids.

Days are calendar days; **months** are calendar months.

A **defect** is any part of the works not completed in accordance with the contract or distress developed in work irrespective of any causes.

The **Defects liability cum routine maintenance** is the period named in the contract data and calculated from the completion date. It is incidental to work and nothing extra is payable on account of this.

It includes routine maintenance of approaches of ROB and Road pavement, lighting, drains, stair case and maintenance of earthen shoulders. Any waviness of defect of any kind in the road and bridge portion shall be removed by appropriate treatment as per direction of Engineer-in-Charge. It will supersede any contrary provisions elsewhere in this regard.

After the Maintenance cum defects liability period has ended and upon correction of defects by the contractor. A certificate of completion will be issued by the Employer.

The **Employer** is the party who will employ the Contractor to carry out the Works.

The **Engineer** is the person named in the contract Data (or any other competent person appointed and notified to the contractor to act in replacement of the Engineer) who is responsible for supervising the contractor, administering the Contract, certifying payments due to the Contractor, issuing and valuing Variations to the Contract, awarding extensions of time, and valuing the Compensation Events.

Equipment is the Contractor/s machinery and vehicles brought temporarily to the Site to Construct the Works.

The **Initial contract Price** is the contract Price listed in the Employer's Letter of Acceptance.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer by issuing an extension of time.

Materials are all supplies, including consumables, used by the contractor for incorporation in the Works.

Plant is any integral part of the Works which is to have a mechanical, electrical, electronic, chemical or biological function.

The **Site** is the area defined as such in the Contract Data.

Site Investigation Reports are those which were included in the Bidding documents and are factual interpretative reports about the surface and sub-surface conditions at the site.

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer.

The **Start Date** is given in the Contract Data. It is date when the Contractor shall commence execution of the works. It does not necessarily coincide with any of the Site Possession Dates.

A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

Temporary Works are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the works.

A **Variation** is an instruction given by the Engineer, which varies the Works.

The **Works** are what the contract requires the contractor to construct, install and handover to the Employer, as defined in the Contract Data.

2. Interpretation

2.1 In interpreting these conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about the conditions of Contract.

2.2 If sectional completion is specified in the contract Data, reference in the conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended completion date for the whole of the Works)

2.3. The documents forming the Contract shall be interpreted in the following order of priority:

- (1) Agreement
- (2) Letter of Acceptance, notice to proceed with the works
- (3) Contractor' Bid
- (4) Contract Data
- (5) Conditions of Contract including Special Conditions of Contract
- (6) Specifications
- (7) Drawings
- (8) Bill of quantities and
- (9) Any other document listed in the Contract Data as forming part of the Contract.

3. Language and Law

3.1 The language of the Contract and the law governing the Contract are stated in the Contract Data.

4. Engineer's Decisions

4.1. Except where otherwise specifically stated, the Engineer will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

5. Delegation

5.1 The Engineer may delegate any of his duties and responsibilities to other people except to the Adjudicator after notifying the Contractor and may cancel any delegation after notifying the Contractor.

6. Communications

6.1 Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian contract Act 1872.)

7. Sub-Contracting

7.1 The Contractor may sub-contract any portion of work, up to a limit specified in Contract Data, with the approval of the Adjudicator after notifying the Contractor and may cancel any delegation after notifying the Contractor/s obligations.

8. Other Contractors

8.1. The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, service providers and the Employer between the date given in the Schedule of other Contractors. The contractor shall as referred to in the Contract Data, also provide facilities and services for them as described in the Schedule. The employer may modify the schedule of other contractors and shall notify the contractor of any such modification.

9. Personnel

9.1. The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the Engineer. The Engineer will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.

9.2. If the Engineer asks the Contractor to remove a person who is a member of the Contractor/s staff or his work force stating the reasons the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

10. Employer's and Contractor/s Risks

10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this contract states are Contractor/s risks.

11. Employer's Risks

11.1 The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in India, the risks of war, hostilities, invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power, civil war, riot commotion or disorder (unless restricted to the Contractor/s employees), and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Contractor/s design.

12. Contractor/s Risks

12.1. All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor. Risk of increase in rate of material, labour, machinery etc during original and extended period except for cement, steel and bitumen which will be paid as per clause 47 and Contract Data.

13. Insurance

13.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor/s risks:

- (a) loss of or damage to the Works, Plant and Materials;
- (b) loss of or damage to Equipment;
- (c) loss of or damage of property (except the Works, Plant, Materials and Equipment) in connection with the Contract; and
- (c) personal injury or death.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of an insurance shall not be made without the approval of the Employer.

13.5 Both parties shall comply with any conditions of the insurance policies.

14. Site Investigation Reports

14.1 The Contractor, in preparing the Bid, shall rely on any site Investigation Reports referred to in the Contract Data, supplemented by any information available to the Bidder.

15. Queries about the Contract Data

15.1 The Engineer will clarify queries on the Contract Data.

16. Contractor to Construct the Works

16.1 The Contractor shall construct and install the Works in accordance with the Specification and Drawings.

17. The Works to be completed by the Intended Completion Date

17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the programme submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

18. Approval by the Engineer

18.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Engineer, who is to approve them if they comply with the Specifications and Drawings.

18.2 The Contractor shall be responsible for design of Temporary Works.

18.3 The Engineer's approval shall not alter the Contractor/s responsibility for design of the Temporary Works.

18.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works where required.

18.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Engineer before their use.

19. Safety

19.1 The Contractor shall be responsible for the safety of all activities on the Site.

20. Discoveries

20.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Employer. The Contractor is to notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

21. Possession of the Site

21.1 The Employer shall handover complete or part possession of the site to the contractor 7 days in advance of construction programme. At the start of the work, the employer shall handover the possession of at-least 50% of the site.

22. Access to the Site

22.1 The Contractor shall allow the Engineer and any person authorized by the Engineer access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.

22A. Royalties

Except where otherwise stated, the contractor shall pay all tonnage and other royalties, rent and other payments of compensation, if any, for getting stone, sand, gravel, clay or other materials required for the works.

The contractor has to give proof for making payment of royalty to any state Govt. for procuring stone soling, stone metal, bajri and earth etc. If these are arranged from quarries situated in Haryana but not auctioned by Industries Department, Govt. of Haryana, the Engineer shall be at liberty to make recovery of royalties after due notice to the contractor. The decision of Employer in this regard shall be final.

23. Instructions

23.1 The Contractor shall carry out all instructions of the Engineer pertaining to works which comply with the applicable laws where the Site is located.

23.2 The Contractor shall permit the Employer to inspect the Contractor/s accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Employer, if so required by the Employer.

24. Dispute Redressal System

24.1 If any dispute or difference of any kind whatsoever arises in connection with or arising out of this contract or the execution of Works or maintenance of the Works, whether before its commencement or during the progress of Works or after the termination, abandonment or breach of the contract, it shall, in the first instance, be referred for settlement to the competent authority, described alongwith their powers in the contract data. The competent authority shall within a period of 45 days after being requested in writing by the Contractor to do so, convey his decision to the contractor. Such decision in respect of every matter so

referred shall, subject to review as hereinafter provided, be final and binding upon the Contractor. In case the Works is already in progress, the Contractor shall proceed with the execution of works, including Maintenance thereof, pending receipt of the decision of the competent authority as aforesaid with all due diligence.

24.2 Either party shall have the right of appeal, against the decision of the competent authority, to the Standing Empowered Committee if the amount appealed against exceeds rupees one lakh.

24.3 The Composition of the Empowered Standing Committee will be

- i) One official member, Chairman of the Standing Empowered Committee, not below the rank of Special Secretary to State Govt.
- ii) One official member not below the rank of Chief Engineer: and
- iii) One Non official member who will be technical expert of Chief Engineer's level selected by the contractor from a panel of three given to him by the Employer.

24.4 The Contractor and the Employer will be entitled to present their case in writing duly supported by documents. If so requested, the Standing Empowered Committee may allow one opportunity to the Contractor and the Employer for oral arguments for a specified period. The Empowered Committee shall give its decision within a period of ninety days from the date of appeal, filing which the contractor can approach the appropriate court for the resolution of the dispute.

24.5 The decision of the Standing Empowered Committee will be binding on the Employer for payment of claims upto five percent of the Initial Contract Price. The Contractor can accept and receive payment after signing as "in full and final settlement of all claims". If he does not accept the decision, he is not barred from approaching the courts. Similarly, if the Employer does not accept the decision of the Standing Empowered Committee above the limit of five percent of the Initial Contract Price, he will be free to approach of courts applicable under the law.

However, in case of contract amount more than Rs. 2.00 Crore the either party can approach for arbitration if not satisfied for the decision of Standing Empowered Committee as per clause 25.

25. ARBITRATION

25.1 **For works less than Rs. 2.00 Crore.** Disputes will be resolved only through Dispute Redressal System as per clause 24. There will be no Arbitration for works costing upto Rs. 2.00 Crore.

The procedure for arbitration will be as follows:

25.2 **For works costing more than Rs. 2.00 Crore and upto Rs. 10.00 Crore.**

Where any of the party is not satisfied with the order past by the competent authority/ Standing Empowered Committee as per clause 24 of the condition of the contract can apply for appointment of Arbitrator. In case the party invoking arbitrator is contractor he shall deposit @ of 2% claim amount with Engineer-in-Charge. On termination of the arbitration proceedings, this fee shall be adjusted against the cost, if any, awarded by the arbitrator against the claimant party and the balance remaining after such adjustment, and in the absence of such cost being awarded, the whole of the sum bill will be refunded within one month of the date of award. The Engineer-in-Chief will appoint sole arbitrator from the list approved by the Government within 60 days from the receipts of the application.

25.3 (a) **For work costing more than Rs. 10 Crores**

Where any of the party is not satisfied with the order past by the competent authority/ Standing Empowered Committee as per clause 24 of the General condition of the contract can apply for appointment of Arbitrator. In case the party invoking arbitrator is contractor he shall deposit @ of 2% claim amount with Engineer-in-Charge. On termination of the arbitration proceedings, this fee shall be adjusted against the cost, if any, awarded by the arbitrator against the claimant party and the balance remaining after such adjustment, and in the absence of such cost being awarded, the whole of the sum bill will be refunded within one month of the date of award. A arbitrator tribunal consisting of 3 arbitrators, one each to be appointed by the Employer and the contractor and the third arbitrator to be chosen by the two arbitrators so appointed by the party to act as Presiding Arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the Administrative Secretary, PW (B&R) Department (Principal Secretary/ Additional Chief Secretary) as the case may:

(b) The Arbitral Tribunal shall consist of three Arbitrators one each to be appointed by the Employer and the Contractor. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties, and shall act as a presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding arbitrator shall be appointed by the Administrative Secretary, PW (B&R) Department (Principal Secretary/ Additional Chief Secretary) as the case may.

(c) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) and (b) above within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the Administrative Secretary, PW (B&R) Department shall appoint the arbitrator. A certified copy of the order of the Administrative Secretary, PW (B&R) Department, making such an appointment shall be furnished to each of the parties.

(d) Arbitration proceedings shall be held in India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.

(e) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as per bid document. However, the expenses incurred by each party in connection with the preparation, presentation, etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself. The fee and expenses of presiding Arbitrator shall be borne by both the parties equally.

(f) Performance under the contract shall continue during the arbitration proceedings and payments due to the contractor by the owners shall not be withheld, unless they are the subject matter of the arbitration proceedings.

(g) The fee and other charges payable to an arbitrator in case shall be as given in the schedule below:-

Sr. No.	Agreement Amount	Fee payable of Sole Arbitration/ arbitrator in tribunal each	TA/ DA	Charges for computer operator/ clerk	Reading fee and award writing including typing charges and stationery etc
1	Upto Rs. 2.00 Cr.	No arbitrator required			

Signaturer of Tenderer

2	More than Rs. 2.00 Cr. but upto 10.00 Cr. (Sole Arbitrator)	Rs. 10000/- per hearing and maximum Rs. 2.00 Lacs for whole proceedings	As per Govt. rule	Rs. 1000/- per hearing and maximum Rs. 20000/- for the whole proceedings	Rs. 25000/- in lump sum
3	More than Rs. 10.00 Cr. (Tribunal comprising of three arbitrator)	Rs. 12500/- per hearing and maximum Rs. 3.00 Lacs for whole proceedings to each arbitrator.	As per Govt. rule	Rs. 1250/- per hearing and maximum Rs. 25000/- for the whole proceedings	Rs. 25000/- (lump sum) each arbitrator of tribunal.

26. Deleted.

B. TIME CONTROL

27. Programme

27.1 Within the time stated in the Contract Data the Contractor shall submit to the Engineer for approval a Programme showing the general methods, arrangements, order, and timing for all the activities in the Works along with monthly cash flow forecast.

27.2 An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.

27.3 The Contractor shall submit to the Engineer, for approval, an updated Programme at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Programme within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.

27.4 The Engineer's approval of the Programme shall not alter the Contractor/s obligations. The Contractor may revise the Programme and submit it to the Engineer again at any time. A revised Programme is to show the effect of Variations and Compensation Events.

28. Extension of the Intended Completion Date

28.1 The Engineer shall extend the intend completion date, with the approval from authority competent to grant time extension as mentioned in Clause 16.16.6 of PWD Code through employer, if a compensation event occurs or a variation is issued which makes it impossible for completion to be achieved by the intended completion date without the contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost.

The clause 16.16.6 is reproduced as under:-

“16.16.6 The authority competent to technically sanction the estimate shall have the power to grant EOT. However, to check disproportionate EOTs and to ensure uniformity in approach, the Engineer-in-Chief shall issue instructions in this regard from time to time.”

28.2 The Engineer with the approval of the authority competent to grant time extension as per PWD Code Clause 16.16.6 through employer shall decide whether and by how much to extend the intended completion date within 56 days of the contractor asking the Engineer for a decision upon the effect of a compensation event or variation and submitting full supporting information. If the contractor has failed to give early warning to delay or has failed to cooperate in dealing with a delay, the delay by the failure shall not be considered in accessing the new intended completion date.

28.3 The Engineer shall within 14 days of receiving full justification from the contractor for extension of intended completion date refer to the employer. The employer shall refer the case to the authority competent to grant time extension as per Clause 16.16.6 of PWD Code within further 14 days for his decision. If the authority competent to grant time extension fails to give his acceptance within next 28 days, the engineer shall not grant the time extension and the Contractor may refer the matter to the dispute Redressal System under Clause 24.1. In case the employer happens to be the authority competent to grant time extension, he would convey his decision to the Engineer within 42 days.

29. Deleted

30. Delays Ordered by the Engineer

30.1 The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works.

31. Management Meetings

31.1 Either the Engineer or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

31.2 The Engineer shall record the business of management meetings and is to provide copies of this record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

32. Early Warning

32.1 The Contractor is to warn the Engineer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of works. The Engineer may require the Contractor to provide an estimate of the expected effect of the future event or circumstances on the Contract Price and Completion Date. The estimate is to be provided by the Contractor as soon as reasonably possible.

32.2 The Contractor shall cooperate with the Engineer in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer.

C. QUALITY CONTROL

33. Identifying Defects

33.1 The Engineer shall check the Contractor/s work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor/s responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect

34. Tests

3.1 If the Engineer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples.

35. Correction of Defects

35.1 The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

35.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Engineer's notice. The contractor is liable for making good a defect, the Engineer in Charge shall instruct the contractor to.

- a) Repair the defect to meet the requirement of specification;
- b) Replace the defective work; or
- c) Remedy the defect on the basis of an agreed procedure proposed by the contractor.

35.3 The contractor shall do the routine maintenance of approaches of ROB, stair cases service road including pavement road sides and cross drains including surface drains to the required standards and in the manner as defined in clause 1.1 and keep the above in defect free condition during the entire maintenance period which begins from certified date of completion and ends after years.

35.4 The routine maintenance standards shall meet the following minimum requirements and would be carried out without any extra cost it will be incidental of work.

- a) Pot holes on the road surface and jumps to be repaired soon after these appear of brought to his notice either during contractor/s monthly inspection or by the Engineer.
- b) Bridge (approaches) to be maintained in proper condition to make them free from excessive edge drop offs, roughness, scouring or potholes.
- c) Cleaning of surface drains including reshaping to maintain free flow of water
- d) Cleaning of culverts and pits for free flow of water
- e) The cracks if appeared on the road surface, would be repaired/sealed with first coat surfacing using pre-coated stone chips.
- f) Any other maintenance operation required to keep the road traffic worthy at all time during the maintenance period.

35.5 To full fill the objectives laid down in sub clauses 35.3 and 35.4 the contractor shall undertake detailed inspection of the roads at least once in a month. The Engineer can reduce this frequency in case of emergency. The contractor shall forward to the Engineer the record of inspection and rectification each month. The contractor shall pay particular attention on those road section which are likely to be damaged or inundated during rainy season.

35.6 The Engineer may issue notice to the contractor to carry out maintenance of defects, if any noticed in his inspection or brought to his notice. The contractor shall remove the defects within the period specified in the notice and submit to the Engineer a compliance report.

35.7 The maintenance shall be carried out as mentioned in contract data and as per direction of Engineer-in-Charge.

35.8 The contractor will repair the existing failed sub grade/crust if any before laying LBM/WBM etc. at his own cost with 300mm depth of earth work of appropriate quality, 500mm GSB & Balance BM/LBM/WMM etc. as per existing crust. Efforts will be made to open mouth of GSB at side slopes so

that water is drained of . Nothing extra shall be paid on account of this. The cost will be incidental to work and nothing extra is payable failure of sub grade in defect liability period by way of above treatment is to be carried out by the contractor free of cost and is incidental to work and nothing is payable.

36. Uncorrected Defects

36.1 If the Contractor has not corrected a Defect within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect corrected, and the Contractor will pay double of the assessed amount.

D. COST CONTROL

37. Bill of Quantities

37.1 The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.

37.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rates quoted in the Bill of Quantities for each item.

38. Changes in the Quantities

38.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 100 per cent provided the change exceeds 10% of initial Contract Price, the Engineer shall adjust the rate to allow for the change, duly considering,

- (a) justification for rate adjustment as furnished by the contractor,
- (b) economies resulting from increase in quantities by way of reduced plant, equipment, and overhead costs,
- (c) entitlement of the contractor to compensation events where such events are caused by any additional work

38.2 The Engineer shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 per cent, except with the Prior approval of the Employer.

38.3 If requested by the Engineer, the Contractor shall provide the Engineer with a detailed cost breakdown of any rate in the Bill of Quantities.

39. Variations

39.1 All Variations shall be included in updated Programmes produced by the Contractor.

40. Payments for Variations

40.1 The Contractor shall provide the Engineer with a quotation (with breakdown of unit rates) for carrying out the Variation when requested to do so by the Engineer. The Engineer shall assess the quotation, which shall be given within seven days of the requestor within any longer period stated by the Engineer and before the Variation is ordered.

40.2 If the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Engineer, the quantity of work above the limit stated in Sub Clause 38.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.

40.3 If the Contractor/s quotation is unreasonable, the Engineer may order the Variation and make a change to the Contract Price which shall be based on Engineer's own forecast of the effects of the Variation on the Contractor/s costs.

40.4 If the Engineer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

40.5 The Contractor shall not be entitled to additional payment for costs which could have been avoided by giving early warning.

41. Cash Flow Forecasts

41.1 When the Programme is updated, the contractor is to provide the Engineer with an updated cash flow forecast.

42. Payment Certificates

42.1 The Contractor shall submit to the Engineer monthly statements of the estimated value of the work completed less the cumulative amount certified previously.

42.2 The Engineer shall check the Contractor/s monthly statement within 14 days and certify the amount to be paid to the Contractor after taking into account any credit or debit for the month in question in respect of materials for the works in the relevant amounts and under conditions set forth in sub-clause 51(4) of the Contract Data (Secured Advance).

42.3 The value of work executed shall be determined by the Engineer.

42.4 The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.

42.5 The value of work executed shall include the valuation of Variations and Compensation Events.

42.6 The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

43. Payments

43.1 Payments shall be adjusted for deductions for advance payments, retention money and other recoveries in terms of the contract and taxes at source, as applicable under the law.

43.2 Deleted

43.3(a) Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

43.3(b) The rates tendered by the contractor and as accepted by the Department will form the basis of payment for such items under this contract. No material price variation or wages escalation on any account whatsoever the compensation for Force majeure etc. shall be payable under the contract except payable as per price escalation clause if any, provided separately in the tender documents.

43.4 The rates for any item work not included in the BOQ and which the contractor may be called upon to do by the department shall be fixed by the supplementary written agreement between the contractor and the Department before the particular item or items of work is/are executed in the event of such agreement not being entered into and executed the Department may execute these works by making alternative arrangements. The department will not be responsible for any loss or damages on this account.

43.5 The contractor shall work in close co-operation with the contractor/ departmental staff working in the adjacent sections of local authorities.

43.6 The items Nos. description and units given in BOQ are as per Standard Data Book of MORT&H/HSR (Latest Edition) and any discrepancy during the execution of the work in the working rates, quantity and units etc. should be rectified by reference to the printed nomenclature of the MORT&H/HSR which shall be treated as authority and will be binding on the contractor.

43.7 Should there arise any items which may be necessary for the completion of work but which does not appear in the BOQ attached with tenders, items rate will be fixed by analysis of actual inputs of all types including labour and material or derived from the labour and material rates given in the Standard Data Book MORT&H/HSR (Latest Edition). The rates for such non-scheduled items occurring during the course of construction shall be payable subject to the approval of the competent authority. No items of work requiring non-schedule rates will be carried out unless ordered to do so by the Engineer.

43.8 Payment for the work done will be made to the contractor only when the formal agreement has been executed between the parties.

43.9 In the course of execution of various items of work under schedule of items, Rates and Quantities running bills payment for partly completed works will be made to the contractor. The quantum of such works shall be decided by the engineer-in-charge whose decision shall be final and binding on the contractor.

43.10 The agency /bidder to whom the work is allotted rates shall be paid lowest of the following in the running /final bills:-

- a) Amount calculated with the accepted rates of lowest agency.
- b) Amount worked out with the rates L-2/L-3/L-4 and so on
- c) Amount worked out with the accepted percentage above HSR+CP /analytical rates/ NS item rates, worked out in financial statement. Financial statement will be made a part of agreement.

44. Compensation Events.

44.1. The following are Compensation Events unless they are caused by the Contractor;

- (a) The Employer does not give access to 80% of the Site by the Site Possession Date stated in the Contract Data.
- (b) The Employer modifies the schedule of other contractors in a way which affects the work of the contractor under the contract.
- (c) The Engineer-in-Charge orders a delay or does not issue drawings, specifications or instructions required for execution of works due to which the work is delayed. However, these can be issued from time to time during the execution of the work.
- (d) The Engineer-in-Charge instructs the Contractor to uncover or to carry out additional tests upon work which is then found to have no Defects.
- (e) The Engineer-in-Charge does not approve of a subcontract to be let, within 30 days.
- (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of Letter of Acceptance from the information issued to Bidders (including

the Site Investigation Reports), from information available and from a visual inspection of the site.

- (g) The Engineer-in-Charge gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
- (h) Other contractors, public authorities, utilities or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
- (i) The advance payment is delayed, beyond 45 days after receipt of application and bank guarantee.
- (j) The effect on the Contractor of any of the Employer's Risks.
- (k) The Engineer-in-Charge unreasonably delays issuing a Certificate of Completion.
- (l) Other Compensation Events listed in the Contract Data or mentioned in the Contract.

44.2. If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date is extended. The Engineer-in-Charge shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

44.3. As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it is to be assessed by the Engineer-in-Charge and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Engineer-in-Charge shall adjust the Contract Price based on Engineer-in-Charge's own forecast. The Engineer-in-Charge will assume that the Contractor will react competently and promptly to the event.

44.4. The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having cooperated with the Engineer-in-Charge.

45. Tax

45.1 The rates quoted by the Contractor shall be deemed to be inclusive of the sales tax/ vat and other taxes including labour cess that the Contractor will have to pay for the performance of this Contract. The Employer will perform such duties in regard to the deduction of such taxes at source as per applicable law.

46. Currencies

46.1 All payments shall be made in Indian Rupees.

47. Price Adjustment

Valid for projects costing more than Rs. 25.00 Lacs

47.1 Contract price shall be adjusted for increase or decrease in rates and prices of cement, reinforcement steel and bitumen in accordance with the principles and procedures and as per formula given in the Contract data.

47.2 To the extent that full compensation for any rise or fall in cost to the contractor is not covered by the provision of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

48 Retention Money

48.1. The Employer shall retain from each payment due to the contractor the proportion stated in the Contract Data until Completion of the whole of the Works.

48.2. On completion of the whole of the Works half the total amount retained is repaid to the Contractor and balance half when the Defects Liability Period has passed and the Engineer has certified that all Defects notified by the Engineer to the Contractor before the end of defect liability period have been corrected.

48.3. On completion of the whole works, the contractor may substitute the balance half retention money with an “on demand” Bank guarantee.

49. Liquidated Damages

49.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the Contract Data for each day that the Completion Date is later than the Intended Completion Date (for the whole of the works or the milestone as stated in the contract data). The total amount of liquidated damages shall not exceed the amount defined in the Contract Data. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages does not affect the Contractor/s liabilities.

49.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate.

49.3 If the contractor fails to comply with the time for completion as stipulated in the tender, then the contractor shall pay to the employer the relevant sum stated in the Contract Data as Liquidated damages for such default and not as penalty for everyday which elapse between relevant time for completion and the date stated in the taking over certificate of the whole of the works on the relevant section, subject to the limit stated in the contract data.

The employer may, without prejudice to any other method of recovery deduct the amount of such damages from any money due or to become due to the contractor. The payment or deduction of such damages shall not relieve the contractor from his obligation to complete the works or from any other of his obligations and liabilities under the contract.

49.4 If, before the Time for Completion of the whole of the Works or, if applicable, any Section, a Taking – Over Certificate has been issued for any part of the Works or of a Section, the liquidated damages for delay in completion of the reminder of the Works or of that Section shall, for any period of delay after the date stated in such Taking-Over Certificate, and in the absence of alternative provisions in the Contract, be reduced in the proportion which the value of the part so certified bears to the value of the whole of the Works or Section, as applicable. The provisions of this Sub –Clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.

50. Deleted

51. Deleted.

51.1 Deleted.

51.2 Deleted.

51.3 Deleted.

51.4 Secured Advance

The Engineer shall make advance payment in respect of materials intended for but not yet incorporated in the Works in accordance with conditions stipulated in the Contract Data.

52. Securities

52.1 The Performance Security (including additional security for unbalanced bids) shall be provided to the Employer not later than the date specified in the Letter of Acceptance and shall be issued in an amount and form by a bank or surety acceptable to the Employer, and denominated in Indian Rupees. The Performance Security shall be valid until a date 60 days from the date of expiry of Defects Liability Period and the additional security for unbalanced bids shall be valid until a date 60 days from the date of issue of the certificate of completion. In case the time of completion is extended, the validity of performance security shall be correspondingly extended. It carries no interest and is returned to the contractor after the date specified in the contract.

53. Deleted

54. Cost of Repairs

54.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defect liabilities periods shall be remedied by the Contractor at the Contractor/s cost if the loss or damage arises from the Contractor/s acts or omissions.

E. FINISHING THE CONTRACT

55. Completion

55.1 The Contractor shall request the Engineer to issue a Certificate of Completion of the Works and the Engineer will do so upon deciding that the Work is completed.

56. Taking Over

56.1 The Employer shall take over the Site and the Works within seven days of the Engineer issuing a certificate of Completion.

57. Final Account

57.1 The Contractor shall supply to the Engineer a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Engineer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor/s account if it is correct and complete. If it is not, the Engineer shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the Contractor and issue a payment certificate, within 56 days of receiving the Contractor/s revised account.

58. Operating and Maintenance Manuals

Valid for projects costing more than Rs. 25.00 Lacs

58.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.

58.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

59. Termination

59.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

59.2 Fundamental breaches of Contract include, but shall not be limited to the following:

- (a) the Contractor stops work for 28 days when no stoppage of work is shown on the current Programme and the stoppage has not been authorized by the Engineer;
- (b) the Engineer instructs the Contractor to delay the progress of the Works and the instruction is not withdrawn within 28 days;
- (c) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- (d) a payment certified by the Engineer is not paid by the Employer to the Contractor within 56 days of the date of the Engineer's certificate;
- (e) the Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the contractor fails to correct it within a reasonable period of time determined by the Engineer;
- (f) the Contractor does not maintain a security which is required;
- (g) the Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract data;
- (h) if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this paragraph : "corrupt practice" means the offering , giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition."

59.3 When either party to the Contract gives notice of a breach of contract to the Engineer for a cause other than those listed under Sub Clause 59.2 above, the Engineer shall decide whether the breach is fundamental or not.

59.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.

59.5 If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

60. Payment upon Termination

60.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done less advance payments received upto the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the

Contract Data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor the difference shall be a debt payable to the Employer.

60.2 If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Engineer shall issue a certificate for the value of the work done, the cost of balance material brought by the Contractor and available at site, the reasonable cost of removal of Equipment, repatriation of the Contractor/s personnel employed solely on the Works, and the Contractor/s costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

61. Property

61.1 All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of a Contractor/s default.

62. Release from Performance

62.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

63. Defect Liability cum Routine Maintenance

The defect liability cum routine maintenance period is the period named in the contract data and calculated from the completion date. It is incidental to work and nothing extra is payable on account of this. It includes routine maintenance of approaches of ROB and Road pavement, lighting, drains, stair case and maintenance of earthen shoulders. Any waviness of defect of any kind in the road and bridge portion shall be removed by appropriate treatment as per direction of Engineer-in-Charge. It will supersede any contrary provisions elsewhere in this regard.

63.1 In defect liability period the Engineer shall give notice to the Contractor of any defects before the end of the defect liability period, which begins at completion and ends after 3 years.

63.2 Every time notice of defect/ defects is given, the Contractor shall correct the notified defect /defects within the duration of time specified by the Engineer's notice.

63.3 In routine maintenance standard shall meet the following minimum requirements:

1. Potholes on the road surface to be repaired soon after these appear or brought to his notice either during contractor's monthly inspection or by the Engineer.
2. Road shoulders to be maintained in proper condition to make them free from excessive edge drop offs, roughness, scouring or potholes.
3. Cleaning of surface drains including reshaping to maintain free flow of water.

63.4 The inspection shall be carried out in the month of June and December and at the end of Defect liability period.

63.5 The contractor shall inspect the ROB/ RUB/ Bridge whichever is applicable after every six month and shall give detail inspection report to the Engineer and also remove the defect and do the routine maintenance.

63.6 At the completion of Defect liability period, the Engineer shall make a detail inspection and give a list of defect/ routine maintenance to the contractor which needs to be rectified. The contractor shall immediately remove these defect. If the contractor fails to remove these defects/ routine maintenance, the defect liability shall be extended by three months.

63.7 If the contractor fails to remove the defect even within three months, the Engineer shall quantify the amount of defect/ routine maintenance and get it carried out at the risk and cost of contractor and the amount shall be recovered from the any amount of contractor lying with the Deptt.

After the Maintenance cum defects liability period has ended and upon correction of defects by the contractor. A certificate of completion will be issued by the Employer.

64. Video photography of the works

The contractor shall do video photography of the site firstly before the start of the work, secondly mid-way in the execution of different stages of work and lastly after the completion of the work. Video photography of all items which will be subsequently covered and difficult to be measured after wards shall be done for record. No separate payment will be made to the contractor for this. VCD before start of work will be submitted to the Engineer and copy of the same to the employer for record within one month from start of work. VCD after completion of work will also be submitted to the Engineer and the employer **within one month after completion of work.**

F. SPECIAL CONDITIONS OF CONTRACT

1 The work of shifting of water supply line, electricity line has been allotted to the separate agencies. The contractor has to co-ordinate with these agencies and will co-operate with them in execution of works.

In case of failure of original agency or non finalization of tender by client deptt. for shifting of these utilities the work will be assigned to the contractor for shifting these utilities. The payment will be made as per approved tender rates of the concerned deptt. for utilities shifting or the rates provided in the estimate, so technically sanctioned by the competent authority of the client deptt.

2 If the quantity of structural steel/ reinforcement bars (8 mm, 10 mm, 12 mm, 16 mm/20 mm/25 mm, 28 mm etc.) used in work is in excess of the quantity mentioned in the BOQ, then the rates for this excess quantity will be the same as the rates quoted by the bidder in the financial bid. No separate rates will be approved for this excess quantity of structural steel. This condition will over rule the condition stated elsewhere in the bidding document, wherever relevant and applicable.

3 The contractor will be responsible for traffic management during execution of work and will also provide road signage, ballads, gunny bags, barricading etc. for safety of traffic. All this will be incidental to work and nothing extra shall be paid.

4. LABOUR :

The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

5. **COMPLIANCE WITH LABOUR REGULATIONS :**

During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or the Central Government or the local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rule/regulations including amendments, if, any on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK.

- a) Workmen Compensation Act 1923:- The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- b) Payment of Gratuity Act 1972 :- Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more on death, the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- c) Employees P.F. and Miscellaneous Provision Act 1952 :- The Act Provides for monthly contributions by the Employer per workers @ 10% or 8.33%. The benefits payable under the Act are:
 - (i) Pension or family pension on retirement or death, as the case may be.
 - (ii) Deposit linked insurance on the death in harness of the worker.
 - (iii) Payment of P.F. accumulation or retirement/death etc.
- d) Maternity Benefit Act 1951 :- The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) Contract Labour (Regulation & Abolition) Act 1970 :- The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to

provide, the same are required to be provided, by the Principal Employer by Law. The principal Employer is required to take Certificate or Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer, if they employ 20 or more contract labour.

- f) Minimum Wages Act 1948 :- The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act, if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.
- g) Payment of Wages Act 1936 :- It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- h) Equal Remuneration Act 1979 :- The Act provides for payments of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- i) Payment of Bonus Act 1965: - Deleted
- j) Industrial Disputes Act 1947 :- The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- k) Industrial Employment (Standing Orders) Act 1946 :- It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.
- l) Trade Unions Act 1926 :- The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- m) Child Labour (Prohibition & Regulation) Act 1986 :- The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.
- n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979 :- The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home upto the establishment and back, etc.
- o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996 :- All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide

safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

- p) Factories Act 1948 :- The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

SECTION 4
CONTRACT DATA

CONTRACT DATA

**Clause Reference
with respect to
Section-3.**

Items marked “N/A” do not apply in this Contract.

1. The Employer is [C1.1.1]
Name: Superintending Engineer,
Address: Circle, PWD B&R Br.,
Name of authorized Representative
2. The Engineer is Executive Engineer, Provl. Division.....
PWD B&R Br.
Name of Authorized Representative:.
3. Deleted.
4. The Defects Liability Period is 3 years from the date of completion. [C1.1&35]
It is incidental work and nothing extra shall be paid.
5. The Start Date shall be 15 days after the issue of the Notice [C1.1.1]
to proceed with the work.
6. The Intended Completion Date for the whole of the works is [C1.1.1, 17&28]
months after start of work with the following milestones:
Milestone dates: [C1.2.2 & 49.1]

<u>Physical works to be completed</u>	<u>Period from the start date</u>
Milestone 1 i.e., 20%	... months.
Milestone 2 i.e., 45%	... months.
Milestone 3 i.e., 75%	... months.
Milestone 4 i.e., 100%	... months.
7. The Site is located at _____ [C1.1.1]
8. The name and identification number of the Contract is: [C1.1.1]
9. The work consists of approaches of ROB, Bridge Work, Road Work, Side Drains, RCC etc.. The works shall, inter alia, include the following, as specified or as directed:

(A) Road Works

Site clearance; setting-out and layout; widening of existing carriageway and strengthening including camber corrections; constructions of new road/ parallel service road; bituminous pavements remodeling/construction of junctions, intersections, bus bays, lay byes supplying and placing of drainage channels, flumes, guard posts and guard other related items; construction/extension of cross drainage works, bridges, approaches and other related stones; road markings, road signs and kilometer/hectometer stones; protective works for roads/bridges; all aspects of quality assurance of various components of the works; rectification of the defects in the completed works during the Defects Liability Period; submission of “As-built” drawings and any other related documents; and other item of work as may be required to be carried out for completing the works in accordance with the drawings and provisions of the contract to ensure safety.

(B) Bridge Works

Site clearance; setting out, provision of foundations, piers abutments and bearings; prestressed/reinforced cement concrete superstructure; wearing coat, hand railings, expansion joints, approach slabs, drainage spouts/downtake pipes, arrangements for fixing light posts, water mains, utilities etc; provision of suitably designed protective works; providing wing/ return walls; provision of road markings, road signs etc.; all aspects of quality assurance; clearing the site and handing over the works on completion; rectification of the defects during the Defects Liability Period and submission of “As-built” drawings and other related documents; and other items of work as may be required to be carried out for completing the works in accordance with the drawings and the provision of the contract and to Insure safety.

(C) Other Items

- Any other items as required to fulfill all contractual obligations as per the Bid documents. [C1.1.1]
10. The following documents also form part of the Contract : [C1.2.3(9)]
Undertaking given by agency, if any.
11. The law which applies to the Contract is the law of Union of India. [C1.3.1]
12. The language of the Contract documents is English [C1.3.1]
13. Limit of subcontracting _____ of the Initial Contract Price [C1.7.1]
14. The Schedule of Other Contractors [C1.8]
15. The Schedule of Key Personnel (As per Annex-II Section-I) [C1.9]
16. The minimum insurance cover for physical property, injury and death is **Rs.** _____ per occurrence with the number of occurrences limited to four. After each occurrence, Contractor will pay additional premium necessary to make insurance valid for four occurrences always. [C1.13]
17. Site investigation report [C1.14]
18. The Site Possession Dates shall be given immediately after issue of acceptance letter/letter to proceed with the work. [C1.21]
19. Deleted.
20. Competent Authorities are: The Superintending Engineer with power to settle differences/ disputes upto 2% of Contract sum or Rs. 2.00 lacs whichever is less and Chief Engineer with powers upto 4% of Contract sum or Rs. 20.00 lacs whichever is less.
21. The period for submission of the programme for approval of Engineer shall be _____ **days** from the issue of Letter of Acceptance. [C1.27.1]
22. The period between programme updates shall be _____ [C1.27.3]
23. The amount to be withheld for late submission of an updated programme shall be **Rs.** [C1.27.3]
24. The following events shall also be Compensation Events: [C1.44]
Substantially adverse ground conditions encountered during the course of execution of work not provided for in the bidding document. [GCC Clause 24]

- (i) Removal of underground utilities detected subsequently
 - (ii) Significant change in classification of soil requiring additional Mobilization by the contractor, e.g. ordinary soil to rock excavation,
 - (iii) Removal of unsuitable material like marsh, debris dumps, etc not caused By the contractor
 - (iv) Artesian condition
 - (v) Seepage, erosion, landslide
 - (vi) River training requiring protection of permanent work
 - (vii) Presence of historical, archeological or religious structures, monuments Interfering with the works
 - (viii) Restriction of access to ground imposed by Civil, Judicial, or Military authority.
- 25.** The currency of the Contract is Indian Rupees. [C1.46]
- 26. The formula for price adjustment of prices are:** [C1.47]
- (i) Adjustment for cement**
- a. If after submission of the tender, the price of cement and /or steel reinforcement bars incorporated in the works (not being a material supplied from the Engineer-in-Charge's store) increase(s) beyond the price(s) prevailing at the time of the last stipulated date for receipt of tenders (including extensions, if any) for the work, then the amount of the contract shall accordingly be varied and provided further that any such increase shall not be payable if such increase has become operative after the stipulated date of completion of work in question.
 - b. If after the submission of the tender, the prices of cement and /or steel reinforcement bars incorporated in the works (not being a material supplied from the Engineer-in-charge's stores) is decreased, Govt. shall in respect of these materials incorporated in the works (not being materials supplied from the Engineer-in-Charge's stores) be entitled to deduct from the dues of the contractor such amount as shall be equivalent to the difference between the prices of cement and /or steel reinforcement bars as prevailed at the time of last stipulated date for receipt of tenders including extensions if any for the work and the prices of these materials on the coming into force of such base price of cement and /or steel reinforcement bars issued under authority of Engineer-in-Chief, Haryana PWD B&R Br., Chandigarh.
 - c. It is further clarified that the decrease in the prices of cement & steel shall be deducted from the dues of the contractor if such decrease has become operative after the stipulated date of completion of work in question and increase shall not be payable if such increase has become operative after the stipulated date of completion of work in question.
 - d. The increase/decrease in price shall be determined by the All India Wholesale Price Indices for Cement and Steel (rebar) as published by the Economic Advisor to Government of India, Ministry of Commerce and Industry and base price for cement and/or steel reinforcement bars as issued under authority

of Engineer-in-Chief, Haryana PWD B&R Br., Chandigarh, as valid on the last stipulated date of receipt of tender, including extension if any and for the period under consideration.

e. The amount of the contract shall accordingly be carried for cement and /or steel reinforcement bars will be worked out as per the formula given below:

a) **Adjustment for component of ‘Grey Cement’**
$$V_c = P_c \times Q_c \times \frac{CI - CI_o}{CI_o}$$

Where,

V_c= Variation in cement cost i.e. increase or decrease in the amount in rupees to be paid or recovered.

P_c= Base price of cement as issued under authority of Engineer-in-Chief, Haryana PWD B&R Br., Chandigarh. Valid at the time of the last stipulated date of receipt of tender including extensions, if any.

Q_c= Quantity of cement used in the works since previous bill.

CI_o= All India wholesale price Index for Grey cement as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce as valid on the last stipulated date of receipt of tenders.

CI= All India Wholesale Price index for Grey cement for period under consideration as published by Economic Advisor to Government of India, Ministry of Industry and Commerce. The period under consideration will be actual consumption of Grey cement or date of purchase whichever is The period under consideration will be actual consumption of Grey cement or date of purchase whichever is earlier. The contractor shall submit the original voucher/ Bill of purchase.

b) **Adjustment for component of ‘Steel’**

$$V_s = P_s \times Q_s \times \frac{SI - SI_o}{SI_o}$$

Where,

V_s= Variation in cost of steel reinforcement bars i.e. increase or decrease in the amount in Rupees to be paid or recovered.

P_s= Base price of steel reinforcement bars, as issued under authority of Engineer-in-Chief, Haryana PWD B&R Br., Chandigarh at the time of the last stipulated date of receipt of tender.

Q_s= Quantity of steel paid either by way of secured advance or used in the works since previous bill (whichever is earlier).

SI_o= All India Wholesale Price Index for Steel (rebar) for the period under consideration as published by Economic Advisor to Government of India, Ministry of Industry and Commerce as valid on the last stipulated date of receipt of tenders including extensions, if any.

SI= All India Wholesale Price Index for Steel (rebar) for the period under consideration as published by Economic Advisor to Government of India, Ministry of Industry and Commerce.

Rate of Cement & Steel:-

For cement Grey cement Rs. 5000/- per MT including taxes.

For Bars and Rods Rebar Rs. 47,000/- per MT including taxes.

For Cement, Bars and Rods

A meeting was conveyed regarding amendment in nomenclature of items of cement and bars and rods in the price variation clause of SBD's of the department in view of the change of nomenclature by Economic advisor Govt. of India. The nomenclature of cement and bars and rods has been deleted by the Signaturer of Tenderer

Economic Advisor in WPI index. The new nomenclature which suits construction activity is Grey cement for OPC/PPC and rebar for reinforcement steel. As per definition of Rebar, a rod or bar used for reinforcement in concrete or asphalt pouring is called as rebar.

For cement	Grey cement
For Bar and rods	Rebar

c) Variation in the rates of Bitumen/Emulsion

(i) That the rates for bitumen/emulsion at the refinery on the date of receipt of tenders shall be considered as base rate. If during execution of the work, the rates of bitumen/emulsion or increases or decreases at refinery, the difference in cost shall be paid/recovered from the contractor in the bill subject to the following conditions:-

a. The contractor shall submit original bill/voucher of the refinery while claiming the payment for the work done. The bill/voucher should pertain to the period of original contractual time limit and should correspond with the progress of work. No extra payment due to increase in rate of bitumen/emulsion will be paid if the original bill/vouchers are not submitted by the agency. No increase in the prices of the bitumen/emulsion shall be reimbursed to the contractor beyond the original time period allowed for Construction as per contract agreement irrespective of extension of time limit granted to the agency for any reason whatsoever.

b. No increase in price of the bitumen/ emulsion shall be reimbursed to the contractor beyond the original time period allowed for construction as per contract agreement irrespective of extension of the time limit granted to the agency for any reason, whatsoever. However, decrease in price of bitumen /emulsion shall be recouped from the contractor even beyond the original time period allowed for construction.

c. After approval of tender, the contractor shall submit the work programme for execution of work and get it approved from the Engineer in charge in the time limit prescribed in the tendered document. The increase in the rate of bitumen, emulsion shall only be paid if the bituminous work is carried out within the prescribed period as per the approved work programme.

d. Only actual difference of rates of Bitumen will be payable/ deductible to the contractor. No overhead charges and contractor profit etc. are to be added /deleted, no tender premium is to be added / deleted.”

e. The contractor can arrange the bitumen from any of the refinery or import the same subject to the condition that the quality of bitumen as per the requirement of contract and specifications. Regarding payment of price variation of bitumen as per the agreement, that the escalation de-escalation will be paid on the basis of lesser cost implication to Department/ Government on consideration of the difference in rates as given below subject to financial regulatory and other terms and conditions of agreement:-

(a) Prevailing rates of IOC refineries at Panipat at the time of tender and at the time of purchase of bitumen.

(b) Prevailing rates at the source from which the bitumen is purchased by the contractual agency at the time of tender.

It is further clarified that:-

- (a) When recovery is due on account of decrease in rates of bitumen, higher of the difference in rates of IOC Panipat and that of private refinery/ Sector, shall be considered.
- (b) When escalation is due to increase in rates of bitumen is due to agency, then lesser of the difference in rates of IOC Panipat and that of private refinery/ Sector, from whom bitumen was purchased, shall be considered.

27. The proportion of payments retained (retention money) shall be 10% from [CI.48]
of each Running bill subject to a maximum of 5% of final contract price.
28. Amount of liquidated damages for For whole of work [CI.49]
delay in completion of works as well as (1/2000)th of the initial
the completion of millstones Contract Price, rounded
off to the nearest
Thousand, per day.
For sectional Completion
(1/6000)th of the initial contract
Price, rounded off to the
nearest Thousand, per day.
29. Maximum limit of liquidated damages 10 per cent of the initial [CI.49]
delay in completion of work. Contract Price rounded off to the nearest
thousand.
30. Deleted
31. Deleted
32. The amounts of the advance payment are: [CI.51 & 52]

Nature of Advance

**Amount (Rs.) Conditions to
be fulfilled.**

i) **Deleted.**

ii) **Deleted**

iii. Secured 75% of Invoice value.

advance for
non-perish-
able materials
brought to site.

a) The materials are in-
accordance with the
specification for works;

b) Such materials have been
delivered to site, and are
properly stored and
protected against damage or
deterioration to the satis-
faction of the Engineer.
The contractor shall store

- the bulk material in measurable stacks;
- c) The Contractor/s records of the requirements, orders, receipt and use of materials are kept in a form approved by the Engineer and such records shall be available for inspection by the Engineer.
 - d) The contractor has submitted submitted with his monthly statement the estimated value of the materials on site together with such documents as may be required by the Engineer for the purpose of valuation of the materials and providing evidence of ownership and payment thereof;
 - e) Ownership of such materials shall be deemed to vest in the Employer for which the Contractor has submitted an Indemnity Bond in an acceptable format; and
 - f) The quantities of materials are not excessive and shall be used within a reasonable time as determined by the Engineer.

(The advance payment will be paid to the Contractor no later than 28 days after fulfillment of the above conditions.)

33. Deleted

34. Repayment of secured advance: [CI.51.4]

The advance shall be repaid from each succeeding monthly payments to the extent materials [for which advance was previously paid pursuant to Clause 51.4 of G.C.C.] have been incorporated into the Works.

35. The Securities shall be for the following minimum amounts equivalent as a [CI.52]

percentage of the Contract Price:

Performance Security for 5 per cent of contract price plus Rs. (to be decided after evaluation of the bid) as additional security in terms of ITB

Clause 29.5.

The standard form of Performance Security acceptable to the Employer shall be an unconditional Bank Guarantee of the type as presented in Section 8 of the Bidding Documents.

- | | | |
|------------|--|------------|
| 36. | The Schedule of Operating and Maintenance Manuals _____ N/A | [CI.58] |
| 37. | The date by which “as-built” drawings (in scale as directed) in 2 sets are required is within 28 days of issue of certificate of completion of whole or section of the work, as the case may be. | [CI.58] |
| 38. | The amount to be withheld for failing to supply “as-built” drawings by the date required is Rs.5.00 Lacs. | [CI.58] |
| 39. | The following events shall also be fundamental breach of contract:
“ The Contractor has contravened Sub-clause 7.1 and Clause 9 of GCC.” | [CI.59.2] |
| 40. | The percentage to apply to the value of the work not completed representing the Employer’s additional cost for completing the Works shall be <u>20</u> per cent. | [3, CI.60] |

SECTION 5
TECHNICAL SPECIFICATIONS

1.0 NAME OF WORK: _____

2.0 SCOPE OF WORK:

- (a) Type of foundation _____
- (b) Sub-structure _____
- (c) Super-structure _____
- (d) Service road/diversion road as per design and drawing _____

3.0 LOCATION OF WORK:

3.1 The site is located at _____

4.0 SPECIFICATIONS AND PLANS:

- 4.1 The work shall be executed as per MORT&H/PWD Standard specification/ relevant I.S./I.R.C. Code/Latest Edition for material and works with latest editions & approved drawings,
- 4.2 Some of the Code of practice are mentioned as under (with upto date correction slips):-
 - 1) I.S. code of practice for plain and reinforcement concrete for general building construction (I.S. 456-2000).
 - 2) I.S./I.R.C. Code of Practice for plain/reinforced and pre-stressed concrete for general/bridge construction.
 - 3) I.S./I.R.C. Rules specifying the loads for design of super structure and substructure of Bridge work.
 - 4) I.S./I.R.C. Bridge substructure and foundations code-code of practice for the design of the substructure and foundation of bridges.
 - 5) Indian Road Congress Codes for items not specially covered by any code or provision mentioned in these documents (All sections).
 - 6) I.S. Methods on testing of soil I.S. 2720 (all parts) latest revision with up to date correction slips).
 - 7) I.S code for use of structural steel in general building construction (IS 800-1984).
 - 8) I.S code of practice for Electric welding of mild steel IS 823-1964.
 - 9) IS Code of practice for fine and coarse aggregate from natural source for concrete (IS 383-1979)
 - 10) IRC 83 (Part III) 2002 standard specifications and code of practice for road over bridges (POT, POT cum PTFE bearings)

For steel:

- 1) IS 226: 1975 Specification for structural steel.
- 2) IS 800-1984 code of practice for use of structural steel.
- 3) IS 1786: for HYSD bars of reinforcement steel.
- 4.3 Latest edition and upto date correction slip in all the above relevant codes will be applicable so far as this work is concerned.

4.4 In case difference between the provision of codes such as above and any discrepancy in the interpretation of codal provision, decision of Engineer-in-Charge would be treated as final and will be binding upon the contractor.

4.5 Some stipulations of relevant codes for some of the items are mentioned in this tender documents. These stipulations are only for guidance. The work shall be executed as per relevant codes.

5.0 Deleted

6.0 BORED PILE FOUNDATIONS (wherever applicable)

6.1. The depth of bored pile shall be as per design and drawing.

6.2. Construction of bored pile foundations shall be strictly in accordance with the stipulations made in the building digest CBRI India 56 for bored piles for foundations and IS: 2911/1979 part-I to 4. Wherever the tilt of the piles exceeds 2% or the piles shifts by more than what is specified, area will have to be increased and also additional reinforcement will have to be added and expenditure involved including cost of cement and steel shall be borne by the contractor.

6.3 The rates quoted by the contractor shall be over all including rate, for boring through any type of road surface all type of soil whatsoever, use of special liner casing if required, use of any type of material, machinery also including all royalties, taxes etc. Nothing extra will be paid on any account whatsoever.

6.4 **Well foundation:-** As per MORT&H specification wherever applicable.

7.0 FORM WORK

7.1 Form work shall be of steel plates fixed on the angle iron frame or waterproof ply wood shuttering of adequate thickness unless otherwise directed by the Engineer-in-charge. It should be watertight sufficiently strong and rigid to resist forces caused by vibration and incidental loads associated with it and keep the form rigid.

7.2.1 If at any stage of work during/ after placing the concrete in the structure, the work is found defective, such concrete shall be removed and work shall be redone with fresh concrete and adequate and rigid forms at the cost of contractor. The props for the centering wherever permitted shall be supported by the double wedges in order to facilitate causing & removal of the shuttering without jarring. Centering and shuttering should be carefully released in order to prevent the loading being instantly transferred to concrete. The period that shall lapse after the last pour of concrete for easing removal of centering and shuttering shall be fixed by the Engineer-in-charge and will be binding on the contractor/s.

7.2 It may be necessary to make provision for holes/ grooves in the form work to house the various services, for which neither any extra payment shall be made to the contractor/s for making these provisions nor any deduction shall be made on a/c of any saving in RCC/PSC work due to these provision.

7.3 Wherever chamfer or rounded corners are mentioned in the drawing formwork should be such that no chiseling/cutting is required.

7.4 The surface of formwork shall be clear, smooth and free of cement mortar etc.

7.5 The Contractor shall give the Engineer In-charge due notice before placing any concrete in the forms to permit him to inspect and accept the form work and forms as to their strength, alignment and general

fitness but such inspection shall not relieve the contractor of his responsibility for safety of works, men, machinery, materials and for result obtained.

8.0 Removal of Form Work:

8.1 The Engineer In-Charge shall be informed in advance by the contractor of his intension to strike any formwork.

8.2 While fixing the time for removal of form work, due consideration shall be given to the local conditions, character of the structure, the weather and the other conditions that influence the setting of concrete and of the material used in the mix.

8.3 The period shall be suitably increased in case of temperature lower than 25 degree Celsius and for any other conditions tending to delay the setting of concrete.

8.4 These field operation are controlled by strength tests of concrete, the removal of the load supporting arrangements of soffit may commence when concrete has attained strength equal to twice the stress to which the concrete will be subjected to, at the time of striking props including the effect of any further additions of loads. When field operations are not controlled by strength test of the concrete the vertical forms of beams columns & walls may be removed as per orders of the Engineer In-charge.

8.5 All formwork shall be removed without causing any damage to the concrete. Centring shall be gradually and uniformly lowered in such a manner as to avoid any shock or vibrations. Supports shall be removed in such a manner as to permit concrete to take stress due to its own weight uniformly and gradually. Where internal metal ties are permitted, their removable parts shall be extracted without causing any damage to the concrete and the remaining holes filled with mortar. No permanently embedded metal parts shall have less than 40mm cover to the finished concrete surfaces, where it is intended to re-use released form work, it shall be cleaned and make good to the satisfaction of Engineer-in-charge.

9.0 REINFORCEMENT:

9.1 Reinforcement may be TMT as per the drawings and confirming to the latest ISI /IRC codes. Steel will be procured from TISCO/Rastriya Ispat Nigam Limited.

9.2 Before use, contractor's will be required to obtain test certificate for the quality of reinforcement used, at his/their own cost form the laboratory/institute, approved by the Engineer-in charge.

9.3 Contractor will ensure that before fixing reinforcement, bars are cleaned with dry gunny bags to remove the light rust or other impurities, if any.

9.4 Welding of reinforcement will not be generally permitted except in special circumstances under the written approval of the Engineer-in-charge.

9.5 Binding wire of approved quality shall be arranged by the contractor's himself/themselves and the rates quoted for RCC/PSC work should include cost of this item of work.

9.6 Nothing extra will be paid for overlaps and wastage of steel.

9.7 Reinforcement steel shall be arranged by the contractor and payment made as per items of agreement.

9.8 Payment for the steel reinforcement shall be made on the basis of standard unit weights as per approved drawings and nothing extra will be paid for overlaps and wastage of steel involved in cutting the bars to their required sizes. Nothing extra will be paid for over weight steel and no deduction will be made for under weight steel within the limit of tolerances permitted as per IS 1786-1985.

9.9 Steel having unit weights per meter not falling within the tolerances specified in above IS code shall not be accepted.

10.0 CEMENT:

10.1 Ordinary Portland cement grade-43 conforming to IS-8112 or as specified in drawings of reputed brand such as Ambuja, ACC, Birla, J.K. capable of achieving the required design concrete strength shall only be used and will be arranged by the contractor/ agency.

10.1 To improve the workability of concrete and cement grout admixtures conforming to IS-6925 and IS-9103 could be permitted subject to satisfactory proven use. Admixtures generating hydrogen, nitrogen, chlorides etc. shall not be used.

10.2 Maximum Cement content in concrete shall be as per relevant code of practice. If desired workability is not achieved due to restrictions in cement contents, contractor have to use plasticiser of approved quality for which no extra payment shall be made.

10.3 Quality test certificate for cement as per IS-4031 Code shall be furnished by the contractor before use of cement supplied.

10.4 Cement for use in works, shall be procured by the contractor from the main producers or their authorised dealers only.

10.5 Cement older than 3 months from the date of manufacture as marked on the bags shall not be accepted. Cement bags preferably in paper bag packing should bear the following marking:-

- (i) Manufacturer's name
- (ii) Regd trade mark of manufacturer if any
- (iii) Type of cement.
- (iv) Weight of each bag in Kg or no. of bags/ tonnes.
- (v) Date of manufacture generally marked as week of the year/year of manufacture.

11.0 Quality test certificate for cement as per IS 4031 shall be furnished by the contractor/s at his own cost from the manufacturer, before use of cement.

11.1 Engineer in Charge may also take samples during the course of execution of works and get the cement tested to ascertain its conformity to the relevant IS specifications at contractor/s cost before a particular lot is put to use. Frequency of testing shall be as prescribed by the relevant IS code. Following test interalia shall be carried out.

- i) Fineness
- ii) Compressive strength
- iii) Initial and final setting time
- iv) Consistency
- v) Soundness.

11.2 In case samples tested do not pass quality tests conducted, the entire batch of cement supplied shall be rejected and returned to the contractor/s. No payment for such cement shall be made to the contractor.

11.3 For storage of cement, the contractor shall have to construct a temporary Godown of adequate capacity at his own cost. The contractor shall bring the cement to the site of work only on written instructions from representative of Engineer. It will be obligatory on the part of the contractor to get every consignment/truck of cement weighed in the presence of Engineer or his representative and supply the original copy of weight slip alongwith consignment. The representative of Engineer will verify the weight of cement brought to the site of work and return one verified weigh slip to the contractor after the same is stacked inside the cement Godown under his supervision.

11.4 The record of cement brought to the site of work, daily consumption, daily opening balance and closing balance shall be maintained at the site jointly by the representative of Engineer of work and contractor/s or his/ their authorized representative. For this purpose, 2 sets of registers duly reconciled and signed by the contractor/s and the representative of Engineer of work certifying the opening balance, consumption, closing balance should be maintained. One register each shall be kept in the custody of representative of Engineer of work and contractor or his authorized representative.

11.5 The contractor shall be the custodian of cement Godown and shall keep the Godown under his lock and key to ensure safe custody of cement. The contractor shall ensure that the cement once brought to the site and accounted shall be used at the site only and shall not be taken away from site for any other purpose.

11.6 The contractor shall make the cement Godown available for inspection alongwith connected record to the site Engineer or his representative as and when required.

11.7 The contractor shall ensure that after completion of the work and or termination of the contract for any reason whatsoever, the temporary cement Godown shall be dismantled and all dismantled material /debris shall be removed and the clear site shall be handed over back to Department. All the released material shall be the property of the contractor/s and no payment shall be made by the Department for dismantling etc.

11.8 Tolerance requirements for the mass of cement

(i) Cement supplied one time will be taken as forming one batch. The number of bags taken for sample from each batch shall be as under:-

S.No.	Batch Size	Sample Size
1.	100 to 150	20
2.	151 to 280	32
3.	281 to 500	50
4.	501 to 1200	80
5.	1201 to 3200	125
6.	3201 and above	200

(ii) The bags in sample shall be selected at random.

(iii) The number of bags in sample showing a minus error greater than 2 percent of the specified net mass (50 kg) shall be not more than 5 percent of bags in the sample. Also the minus error in none of such bags in the sample shall exceed 4 percent of the specified net mass of cement in the bags. In case, the minus error exceeds the percentages herein specified, the entire batch of cement samples shall be rejected

(iv) In case of a wagon/Truck load of 10 to 25 tonnes, the over all tolerance on net mass of cement shall be 0 to +0.5 percent. Any batch of cement not conforming to above tolerances will be rejected.

11.9 Stacking of cement in the Godown shall be done on a layer of wooden sleepers so as to avoid contact of cement bags with the floor; or alternatively scrap of sheets may be used in place of sleepers but these must be placed at least 20 cm above the floor. The bags shall be stacked at least 30 cm clear of the walls to prevent deterioration. The wooden sleepers/scrap GI sheet shall be arranged by the contractor/s at his/their own cost.

11.10 Cement shall be stored in such a manner as to permit easy access for proper inspection. Cement should be stacked not more than ten layers high to prevent bursting of bags in the bottom layers and formation of clods. The stacks of cement bags shall be covered with tarpaulin during monsoons so as to obviate the possibility of deterioration of cement by moisture in the atmosphere. Cement that is set or partially set is not to be used.

11.11 Empty cement bags will be the property of contractor.

11.12 Engineer-in-Charge may also take samples during the course of execution of works and get the cement tested to ascertain its conformity to the relevant IS specifications at contractor/s cost before particular lot is put to use. Frequency of testing shall be as prescribed by the relevant IS Code or as per instructions of Engineer in charge.. Following tests interline shall be carried out:-

- i) Fineness
- ii) Compressive strength
- iii) Initial and final setting time
- iv) Soundness
- v) Consistency

12.0 FINE AND COARSE AGGREGATES.

12.1 Fine and coarse aggregate for all types of concrete work shall conform to I.S-383 (Latest Edition).

12.2 In addition to the routine tests, special tests of material will be carried out whenever required by the Engineer. The cost of the special tests will be borne by the contractor. Necessary facilities in the form of moulds, cones, scales, materials, labour for casting, curing specimens and such other facilities as per requisite in any standard concrete tests will, in any case, be afforded by the contractor free of cost. Cement for the tests shall be arranged by the contractor at his own cost and no payment shall be made for this.

13.0 WATER:

13.1 The contractor shall be responsible for the arrangements to get the supply of water necessary for the works at his own cost and rates quoted shall also include the cost of water or any other arrangements required to be made for procuring water and leading/ transporting and carrying water to the site of the work irrespective of the distance from the source of water. The water shall, however, conform to I.S-456.

14.0 CONCRETING: -

14.1 The design mix concrete of strength as indicated as per approved drawings shall be used for foundation, sub-structure and super-structure of the bridge. The contractor will submit design mix along with the calculations to the Engineer-in-Charge. The design mix will have to be got approved from the Engineer In-Charge before use in the construction.

14.2 The concrete shall be mixed properly in mechanical mixer and shall be of proper consistency. The proper consistency shall be determined by Engineer-In charge through tests that shall be carried out by the contractor/s. The Concreting shall be commenced only after the Engineer-in charge has inspected the shuttering, the placement of reinforcement and passed the same. Cost of concrete moulds and other test shall be borne by the contractor/s.

14.3 The concrete shall be compacted immediately after placing by means of mechanical vibrator of approved quality.

14.4 The mixing time of concrete in mixer will be decided by the Engineer, depending upon the type of work and strength of concrete.

14.5 The contractor shall make adequate arrangements for casting of necessary numbers of cubes and cure and finish them as per direction of Engineer.

14.6 The contractor shall establish laboratory in field and provide the necessary equipments to carryout all preliminary test and working out the grading and proportioning of aggregate, assessing the moisture content, casting and testing of cubes etc., in order to obtain and maintain uniform quality of work confirming to codal practices.

14.7 The exposed surface of plain, R.C.C/P.S.C. work shall be rubbed with Carborandum stone and rendered smooth if necessary with cement to leave surface smooth and even. Nothing extra will paid on this account. Cement for the same will be arranged by the contractor/s at his own cost and no payment shall be made.

14.8 The controlled concrete ingredients should be weigh batched in approved type weigh- batcher.

14.9 The slump of the approved trial mix shall be measured and this slump shall not be exceeded through out all the batches of concrete made from the same materials mixed in the same proportion as the trial mixes and used in those parts of the work as instructed.

14.10 **Concreting in hot weather:** Hot weather is defined as any combination of high air temperature, low relative humidity, and wind velocity tending to impair the quality and properties of fresh or hardened concrete. In hot weather, the contractor shall ensure that the temperature of the concrete at the time of placing does not exceed 30 degree C and that the maximum internal temperature attained during setting does not exceed 75 degree C.

The contractor shall provide the effective measures suggested by the Engineer Incharge to protect the concrete from the effects of high temperatures. No concreting in hot weather shall be put in hand until the proposed measures have been approved by the Engineer.

14.11 **Concreting in cold weather:** Cold weather is defined as the situation existing at the work where either or both of the following conditions exist:

- i) The air temperature at the time considered is below 5 degree C.
- ii) The mean daily air temperature over three or more successive days has dropped below 5 degree C.

On no account may concrete be placed in contact with frozen ground or for work in contact with ice, snow or frost on the ground or on form work of reinforced concrete shall not be made with frozen materials, Concreting may proceed in cold weather provided special precautions are taken to ensure that the surface temperature of the concrete at the time of placing is not less than 5 degree C.

The contractor shall provide the effective measures suggested by the Engineer to take to protect the concrete from the effects of low temperatures and with details of the methods he proposes to use to assess the correct timing at which such protection may be removed. No concreting in cold weather shall be put in hand until the proposed measures have been approved by the Engineer.

14.12 Concrete placed in water: Where any concrete is to be placed in water, the contractor shall submit detailed proposals to the Engineer and shall obtain his approval before commencing the work. The quantity of cement in any concrete placed in water, shall, be increased by 10% so that the free water/cement ratio of the mix is not more than the specified.

Concrete shall not be placed in running water or be allowed to fall through water.

Concrete shall be placed in water only by means of a bottom opening watertight box or a tremie of a type approved by the Engineer. Bottom-opening boxes shall not be opened until they are resting on the work, and the lower ends of tremies shall always be kept below the surface of freshly placed concrete.

14.12.1 PRESTRESSING:- As per MORT&H specification wherever applicable.

14.13 MEASUREMENTS:

14.13.1 All work will be paid for at the tendered rates on the basis of actual measurements taken at site. No cognizance will be taken for heights and thickness of structural members over those shown in the plan.

14.13.2 The gross dimensions of RCC/PSC work exclusive of the thickness of plaster shall be measured for purpose of payment. No deduction shall be made for the volume of reinforcement and for small weep holes for drainage etc. No payment shall be made for plastering over the exposed surface of the RCC/PSC.

14.13.3 No deduction shall be made for the volume of sectional steel measurement on the cutting edge for the portion embedded in concrete.

14.14 FOUNDATIONS:

14.14.1 The bed of open foundations should be made horizontal and sides neatly dressed and in all cases got approved by the Engineer before concrete is laid. If foundations are laid in sandy or clay soil, the variation in levels should not be more than 15mm but in case it is laid on soft rock/boulder studded soil larger variation may be permitted by the Engineer, at his discretion according to condition at site. In no case concrete be laid on a sloping bed. In case of loose pockets the same will have to be filled with lean concrete, as directed by the Engineer, for which no extra payment will be made excepting that cement required for this purpose, will be paid to the contractor as per relevant item.

14.14.2 It is expected that design of open foundation will suit in all the bridges. Payment for excavation of foundation of all the structures including foundation of pucca side and catch water drains (embedded concrete and masonry portion) and floor of bridges will be made as per relevant item. It will be applicable to all types of soil including all lead and lift, including excavation water requiring pumping and bailing out of water including back filling in 15cm layers with proper watering & ramming. The payment for excavation of foundation will be as per MORT&H/PWD Standard Specification for material and works irrespective of the fact that excavation has been done in slopes and there have been slips etc. or any shoring or shuttering has been done. The surplus earthwork from foundation (quantity of excavation minus quantity of refilling of earth in foundation limited to vertical dimension) should compulsorily be lead to the adjoining filling without any extra payment for loading, unloading, crossing of nallaha/streams, rehandling, dressing the

filling irrespective of facts whether surplus earthwork from foundations has been utilized or not. No cognizance for any boulder more than 15 kg and 15 cm in dimension will be taken for purpose of any claim and contractor is free to take away such boulders free of cost after paying due royalty etc. to State Govt. if any.

14.15 FOUNDATION TRENCHES:

The space between the side of the foundation trenches and the masonry/concrete is to be filled with the excavated material well rammed in layers not exceeding 15 cm each layer being watered, rammed and consolidated before the succeeding one is laid. Earth shall be rammed with iron rammers where feasible and with the butt ends of crow bars where rammers cannot be used. Earth used for filling shall be free from salts organic or other foreign matter. All clods of earth shall be broken or removed.

The foundation of the bridge shall be of well/pile foundations as per drawing supplied by the Department.

The contractor shall give notice to the Engineer when and as soon as the excavation of any portion of the site for obtaining foundations or bottom whether above or below water has reached the depth and width shown on the drawings. The contractor shall also give further notice to the Engineer whenever any foundation or bottom is ready for inspection and whenever it is necessary to cover up any work in respect of which previous inspection is desired by the Engineer so that the Engineer may inspect the same before it is covered up. No foundations or bottom, of work shall be covered up or filled or built upon without the previous consent of the Engineer. In default of such notice and consent aforesaid the foundation or bottom of work shall on the order of the Engineer be uncovered and any filling put in or work built thereon be removed or pulled down by the contractor at his own cost.

14.16 TESTING OF MATERIALS:

14.6.1 The contractor shall at his own cost arrange and carry out the tests on various types of materials to be used in the work. The tests shall be carry out in Laboratories approved by the Engineer in charge. The frequency of the test and different type of test to be carried out on different materials shall be decided by the Engineer-in-charge. Nothing extra shall be paid on this account.

15.0 STEEL:

15.1 Steel shall conform to latest relevant IS specifications. Test certificate for steel before use as per latest relevant IS specifications will be furnished by the contractor at his own cost from the manufacturer or the laboratories approved by the Engineer In-Charge.

15.2 The Engineer in Charge will also take samples during the course of work and get the steel tested to ascertain their conformity to the relevant IS specifications at the contractor/s cost before a particular lot is to be used. Frequency of testing shall be as prescribed by the relevant IS Code or as per instruction of engineer in charge.

16.0 FINISHING

16.1 No plastering shall be done over the exposed surface of RCC/PSC work, special care should be taken in centering and shuttering and casting to ensure good finish, wherever necessary rendering in 1:3 (1 cement: 3 coarse sand) shall be done to the satisfaction of Engineer-In-Charge. Nozzle and form vibrators are to be used for RCC/PSC work.

17.1 QUALITY CONTROL:

17.1 The contractor shall arrange to maintain the quality of the work during the operation of construction and shall ensure that the same is maintained as laid down in the specification for road and bridge works of the Ministry of Transport and Highways, Government of India, PWD Specification or as per satisfaction of the Engineer-In-Charge.

17.2 The permissible variation from the specified value shall also conform to these specifications. It shall be sole responsibility of the contractor to arrange for quality control test during the construction as per specification. The Engineer-In-Charge shall be empowered to get the quality control tests done through other agency if required, the cost of which shall be borne by the contractor.

18.0 SETTING UP FIELD LABORATORY BY CONTRACTOR:

18.1 The contractor shall set up a field laboratory his own at work site which should be open for use and inspection by the PWD B&R Department at any time. The laboratory shall be equipped with necessary equipments to carry out the various tests such as sieve analysis, compression tests on cubes, slump tests, workability test etc. on aggregate, cement, water and concrete required for acquiring the required quality and standard conforming to codal provisions and Special specifications.

18.2 All the pressures gauges, machines, equipments and other measuring and testing equipments of the laboratory shall be got checked/calibrated regularly as directed by the Engineer and the necessary certificates produced to the Engineer.

18.3 The Contractor shall render all reasonable assistance and help in making the checks and tests. All the equipments, machinery etc. shall be kept in good working conditions.

18.4 Cost of setting up the laboratory, equipping the same, maintaining, conducting all tests on materials and cubes shall be borne by the contractor and nothing extra shall be paid on this account.

19.0 CURING:

19.1 All concrete work in cement mortar, plaster, pointing etc., shall be continuously cured for the prescribed period as per direction of the Engineer, Curing shall be done by covering the newly laid concrete with gunny bags and keeping them wet constantly. If it is found that the contractor is not observing properly these instructions, the Engineer may get the curing done through another agency, labour without any notice to the contractor at the cost of the contractor. The cost incurred along with incidental charges of 2% and along with supervision charges 12 ½ % of the cost will be debited to the contractor.

20.0 SUPPLY OF DRAWINGS :

20.1 Detailed working drawings shall be supplied by the Department during the course of execution subject to compliance to various provisions in the agreements.

20.2 It may clearly be noted that the Engineer in Charge (Const) shall have full power to make alterations in the drawings and to give such further instructions, directions as may appear to him necessary or proposed for the guidance of the contractor and for the official execution and completion and maintenance of the work.

21.0 Earthwork behind/around abutment, wing/return wall:

21.1 The earthwork will be done with contractor/s own earth by borrowing the earth from outside the PWD land and the rate quoted will be deemed to be inclusive of all taxes, royalty, loading, unloading, leading, handling and re-handling of earth, all leads, lifts, ascents, descents, crossing of nallahs, streams,

tracks, leveling, dressing as a complete jobs in all respects as per specifications indicated in succeeding paras. The earthwork shall be compacted mechanically using heavy compactions as per specifications.

21.2 The contractors shall provide all stakes, ballies, bamboo, strings, pegs and labour for setting out profiles, of embankment required for the correct execution of the work and shall also be responsible to maintain in the proper order. He is also required to provide labour for the setting of the same when called upon to do so. This is deemed to be included in the item rate for the earthwork. The contractor/s shall take necessary precautions to prevent their being removed, altered and disturbed and shall be responsible for the consequence of such removal alterations and disturbance and will take action for their proper reinstatement.

21.3 The contractor shall be liable to set up field laboratory with adequate equipments so as to carry out tests of the soil as per direction of Engineer-in-Charge.

21.4 The contractor shall also be required to provide full assistance for carrying out these tests, i.e. labour and other materials etc. The rates quoted by the contractor deem to have included of this element and nothing extra shall be payable to him on this account.

21.5 Engineer-in-charge, if required may get the soil samples tested from another outside agency as deemed suitable and the cost for the same if any shall be borne by the contractor.

21.6 Before the earthwork is started by the contractor the ground between the line where filling/excavation is to be done for embankments, cuttings and training works shall be cleared of all trees along with the roots, shrubs heavy grass, and under growth of every kind. None of the items of work mentioned in this para will entitle the contractor/s to any extra payment.

21.7 The contractor should commence work systematically at one or more points in consultation with the Engineer and should maintain continuous and steady progress to complete the work in continuous length including leveling and dressing.

21.8 Any extra earth deposited on the top and slopes of the formation shall be removed within 48 hours after a written notice. If not complied, the same shall be removed by other means at contractor/s cost. Cost of which shall be recovered from contractor/s bill. The payment shall be made as per designed cross section only.

21.9 It must be clearly understood that the rates are intended to cover the full cost of the finished works . The banks and cuttings are to be correctly dressed to profile with such slopes as specified in each case by the Engineer. The rates for earth work shall also include the following:-

- i) Site clearance as per specifications including cutting of trees.
- ii) Benching in side long ground and existing bank.

21.10 The rates also include maintenance of the banks and cutting to correct profile including repairs of all rain cuts, making good earth work due to base settlement, natural or otherwise due to rains etc. In case of filling embankments and removal of silts and slips that may be accumulated in cutting during rains etc.

21.11 Until the final measurements have been recorded and banks/cutting taken over by the Department, the item rate of BOQ and quantities will cover the full cost of finished work of cutting and embankments.

21.12 The following category of soil shall not be permitted.

- (a) Organic clays, organic silts, peat, chalks and dispersive soils as detailed below:-
 - (i) Poorly graded gravels sands with Cu less than 2.

(ii) Clays and silts of high compressibility i.e. MH, CH

22. CONSTRUCTION JOINTS:

22.1 A construction joint is defined as a joint in the concrete introduced for convenience in construction at which special measures are taken to achieve subsequent continuity without provision for relative movement. (Hacking of laitance, air jetting and wetting). Location of all construction joints shall be predetermined and got approved from Engineer-in-Charge.

22.2 Construction joints shall be located so as not to impair the strength of the concrete. The position of construction joints and the size of the formwork panels shall be so coordinated that where possible the line of any construction joint coincides with the line of a formwork joint and that in any case all construction joint lines and formwork joint lines appear as a regular and uniform series.

22.3 For all exposed horizontal joints and purposely inclined joints, a uniform joint shall be formed with a batten of approved dimensions to give a straight and neat joint line.

NOTE: For more details refer relevant I.S./I.R.C. Code (Latest Edition).

23. CONTRACTORS RESPONSIBILITIES FOR TEMPORARY WORKS & MATERIALS

23.1 The contractor shall from time to time, provide at his own cost all dams, coffer dams, embankments and all other temporary work of whatever nature and temporary materials necessary for the construction, completion and maintenance of works which are the subject of the contract and shall from time to time submit for the information of the Engineer, drawing showing the details, the type and construction of the temporary dams, bridges, embankments and other works which he propose to adopt and construct and the exact position in which he propose to construct and employ them and during the progress of the works he shall if so directed by the Engineer, furnish particulars and drawings of any other temporary works and details or any other temporary materials in use or contemplated to be used by him. He shall be entirely responsible for the sufficiency, security and safety of all dams, coffer dams, bridges, embankments and other temporary works or temporary materials which he may construct and/or employ and for the claims for damages to property or injury to persons arising out of any failure or accident to such dams, coffer dams bridges embankments or other temporary works, or temporary materials from where such cause damage, injury, failure or accident may arise or happen and shall replace, construct, repair and maintenance of the whole of such dams, coffer dams, bridges, embankment or other temporary works or temporary materials until they are certified by the Engineer to be no longer required for the purpose of the contract.

23.2 The contractor shall, before handing over the works or and part thereof to the Department, dismantle and remove all temporary works and temporary materials, but such removal shall not be effected without the previous written approval of the Engineer-in-Charge and the contractor shall comply with the directions (if any) given by him as to the method or removal and/or disposal.

24. BEARINGS.

POT PTFE bearing shall be provided for the girders. The bearings shall be in accordance with the IRC-83 (Pt.III) 2002. (Latest Edition)

These bearings shall be correctly manufactured according to the approved drawings subject to the permissible tolerances. The bearing shall be got approved from Engineer In-charge prior to placement under the girder. For example (Bearing of METCO, Sanfield)

25. EXPANSION JOINTS.

25.1 Compression Seal joint shall consist of steel armored nosing at two edges of joint gap suitably anchored to the deck concrete and a preformed chloroprene elastomer or closed cell foam joint sealer compressed and fixed into the joint gap with special adhesive binder.

25.2 The manufacture /supplier of expansion joint shall be got approved from Engineer-in Charge prior to placing the order. Preference will be given to the bearing of METCO, Sanfield.

26. Material steel nosing: The steel nosing shall be of angle section ISA 100x100 conforming to weldable structural steel as per IS:2062. The thickness of legs shall not be less than 12mm. The top face of the angle shall be provided with Bleeder holes of 12mm diameter spaced at maximum 100mm centers so as to ensure that there are no voids in the concrete beneath the angle.

27. Anchorage: The anchorage steel shall conform to IS: 2062 or equivalent. The steel nosing shall be anchored to the deck by reinforcing bars, headed studs or bolts or anchor plates cast in concrete or a combination of anchor plate and reinforcing bars, headed studs or bolts. Anchor bars, studs or bolts shall engage the main structural reinforcement of the deck and in case of anchor plates or anchor loops, this shall be achieved by passing transverse bars through the loops or plates.

The minimum thickness of anchor plate shall be 12mm. Total cross sectional area of bars, studs or bolts on each side of the joint shall not be less than 1600 mm sq. per meter length of the joint and the center to center spacing shall not exceed 250mm. The ultimate resistance of anchorage shall not be less than 500 KN/m in any direction.

Corrosion protection: All steel section shall be protected against corrosion by hot dip galvanizing or any other approved anticorrosive coating with a minimum thickness of 100 micron.

28. JOINT SEAL:

The sealing element shall be a preformed continuous chloroprene or closed cell foam seal with high shear strength, insensitive to soil, gasoline and ozone. It shall have high resistance to ageing and ensure water tightness. The seal should be vulcanized in a single operation for the full length of the joint required for carriage way, kerbs and foot paths, if any. The seal shall cater for a horizontal movement upto 40mm and vertical movement of 3mm. EVAZOTE 380 E.S.P, which is low density closed cell, preformed, non-extruding, cross linked ethylene vinyl acetate polyethylene copolymer form to be used. The seal is bonded to the steel nosing with special bond no.1 subsequent to sand blasting of vertical faces.

The physical properties of chloroprene/closed cell foam sealing element shall conform to the following.

(a) **Chloroprene seal:** Shall be preformed extruded multi web cellular section of chloroprene of such a shape as to promote self removal of foreign material during normal service operations. Chloroprene of joints seal shall conform to clause 9.1.5.1 of IRC 83 (Pt.II) and satisfy the properties stipulated in Table 2 of the specifications except in respect of the working movement range of the sealing element which shall be as specified in clause 31.5.1 above.

Closed cell foam steel: Shall perform non-extruded non cellular section made from low density closed cell, cross linked ethylene vinyl acetate, polyethylene copolymer that is physically blown using nitrogen. The material shall possess properties as indicated in the table.

	Property	Specified value
(I)	Density	41.7 – 51.3 kg/cum
(ii)	Compression set on 25mm	50% compression samples (ASTM D 3575) for 22 hrs at 23 degree C,2 hour recovery: 13% set.
(iii)	Working temperature	-70 to + 70 deg. C
(Iv)	Water absorption (total immersion for 3 months) (ASTM D 3575)	0.09766 kg/sqm
(v)	Tensile strength	0.8 Mpa
(vi)	Elongation at break (ASTM D 3575)	195 +/- 20%

Lubricant cum adhesive: The type and application of material used in bonding the preformed joint seal to the steel nosing and concrete shall be as recommended by the manufacturer/supplier of the seal system.

Handling and storage:

- a) The expansion joint material shall be handled with care and stored under cover.
- b) All joint material and assemblies shall be protected from damage and assemblies shall be supplied to maintain true shape and alignment during transportation and storage.

INSTALLATION:

The expansion joint shall be installed by the manufacturer/supplier or their authorized representative, who will ensure compliance of installation procedure and instructions.

The dimension of the joint recess and the width of the gap shall conform to the approved drawing.

Anchoring steel shall be welded to the main reinforcement in the deck maintaining the level and alignment of the joint.

Concreting of pocket/recess shall be done with great care using proper mix conforming to same grade as that of the deck concrete but not less than M35 grade in any case. The water-cement ratio shall not be more than 0.40. If needed suitable admixtures may be used to achieve the workability. The width of pocket shall not be less than 300mm on either side of the joint. Care shall also be taken to ensure efficient bonding between already cast existing deck concrete and the concrete in the joint recess.

At the time of installation, joint shall be clean and dry and free from spoils and irregularities, which might impair a proper joint seal.

Concrete or metal surfaces shall be clean, free of rust, laitance, oils, dirt, dust or other deleterious materials.

The lubricant cum adhesive shall be applied to both faces of the joint and joint seal prior to installation in accordance with the manufacturer’s instructions.

The joint seal shall be compressed to the specified thickness for joint opening and ambient temperature at the time of installation which shall be between + 5 to + 35 degree C.

The joint seal shall be installed without damage to the seal. Loose fitting or open joints shall not be permitted.

Steel nosing system shall be installed in correct camber and alignment of the joint in the recess provided with adequate support bars and loops which shall be welded with the sinusoidal bars of the anchorage system and the exposed reinforcement of the deck slab/PSC girder.

That recess portion shall be concreted with cement concrete (CC) in accordance with M.O.S.T. specification.

The top of expansion joint cc block and top of wearing coat shall be in the same level.

The EVAZOTE – 380 ESP shall be installed between the angle nosing subsequent to sand blasting and applying BONDER no.1 on vertical faces of nosing angle on curing of concrete. The width of seal is 25% more than the expansion gap so the seal is installed in compressed, state.

29. Acceptance Criteria:

All steel elements shall be furnished with corrosion protection system.

For the joint seal the acceptance test shall conform to the requirement stipulated in relevant clause. The manufacturer/supplier of the type of joint shall produce a test certificate to this effect conducted in a recognized laboratory in India or Abroad.

30. Prior to acceptance 25% of the completed and installed joints, subject to minimum of one joint, shall be subjected to water tightness test. Water shall be continuously pounded along with entire length for a minimum period of 4 hours for a depth of 25mm above the highest point of deck. The width of pounding shall be at least 50mm beyond the anchorage block of the joint another side. The depth of water shall not fall below 25mm anytime during the test. A close inspection of the under side of the joint shall not reveal any leakage.

31. Tests and standards of acceptance: The materials shall be tested in accordance with these specifications and shall meet the prescribed criteria. The manufacturer/supplier shall furnish the requisite certificates from the recognized testing laboratory of India or abroad.

The work shall conform to these specifications and shall meet the prescribed acceptance.

32. MACHINERY AND PLANT.

32.1 The contractor will be entirely responsible to arrange all necessary machinery, including concrete mixers, vibrators, compressors, pumps, pneumatic equipments, dredges derricks, cranes, service girders, staging, motor vehicles, trailer tools and plants and their spare parts required for sufficient and methodical execution of work and transport them to the site of work. Delay in procurement of such items due to their non-availability on account of import difficulties or any other cause whatsoever, will not be taken as excuse for slow or non-performance of the work. Safety of plants and machinery will be the responsibility of the contractor and for any loss due to any cause or wash away in flood, or otherwise no claim will be entertained on this account whatsoever.

33. Coordination with Railway for end span (regarding issues of bridges the coordination with Railway considered to be deleted) only for ROB & RUB.

The contractor has to made coordination with the Railway Authorities, during the execution of work. The end span of approaches shall be laid only after consultation with Railway. Nothing extra shall be paid on account of delay of railway portion. However suitable time extension on this account, if any, will be granted by the department.

34. SAFETY OF MEN AT WORK SITE:-

34.1 During execution of the work, contractors shall ensure that all safety precautions are taken by their men to protect themselves and site to prevent any untoward incident. In this regard contractor will ensure that adequate number of safety helmets, safety belts, safety jackets with reflective arm band, rope, ladders, emergency light etc are available at site before the work is actually started. The above list is only indicative and is not exhaustive and safety item will be arranged as per the requirement. Engineer reserves the right to stop the work in the absence of proper safety gear and no claim shall be entertained in this regard. Decision of Engineer in Charge will be final and binding **upon** the contractor. The cost of all the safety gear is deemed to have been included in the rates quoted and nothing extra is payable under this contract.

CONDITIONS FOR EARTH WORK MODE OF MEASUREMENT / EXECUTION OF EARTH WORK IN EXCAVATION/ FILLING

- 1 The Contractor will be responsible for setting out the work, establishing benchmark, central lines etc. and will carry out all such works at his own cost.
- 2 The contractor shall clear the site of work simultaneously as the work proceeds falling which the same shall be got cleared by the Engineer-in-Charge at the risk and the cost of the Contractor.
- 3 Earth shall be good and free from leaves, mud, vegetables, slush and other foreign material.
- 4 Measurement will be made and paid for on the basis of cross sections of the finished embankment at interval of 15 meters as laid down in Haryana PWD Specification No.6.2 para 27 b and para 28
- 5 The actual deductions to arrive the net cubic contents to be paid to be derived on the basis of D.B.Ds at every 75 meters
- 6 Cross section of existing ground at the interval of 15 meters shall be accepted & signed by the contractor before start of the work to consider the final position of the natural level.
- 7 The contractor/ agency will intimate the place with details of Khasra No. of the land from where he propose to cart the earth along with lead chart etc. for embankment in the tender. In case at the time of execution, he brings the earth from the lesser lead than stated in the DNIT his rate will be reduced accordingly. However, if the earth is brought from more than the prescribed lead by the agency no extra rate will be paid.
- 8 In case the agency fails to pay the compensation of earth to the land owners (from where the earth is brought) deduction at the rate of HSR plus sanctioned ceiling premium will be made from the bills and will only be released on the production of proper acknowledgement of the land owners duly certified by the Revenue authority/ Deptt. That the compensation of earth taken has been paid to the land owners/Sarpanch/ Village panchayat. Necessary certification will also be issued by the SDE that the compensation of earth taken from private land has been paid to land owners.
- 9 No pit shall be dug by the tenderer with in the road boundary for taking out earth for use in the work. In case of default, the pit so dug will be filled in by the department at the cost of the tenderer plus 14% department charges also.

- 10 Nothing extra shall be paid for any lead or lift of hardness or wetness or dressing of for any other reason.
- 11 The design of super-elevation at circular curves shall be carried out by the contractor and got approved from the Engineer-in-Charge sufficiently in advance of the actual commencement of the work and the work will be carried out as per design laid.
- 12 The contractor shall make arrangement at his own cost for at least two number of modern leveling instrument (wild type) for the purpose of carrying out leveling operations, failing which the same shall be arranged by the Engineer-in-Charge at contractor risk and cost.
- 13 10% shrinkage will be deducted from the uncompacted quantity of earth work laid in layers as specified in PWD Specifications as per PWD specification No. 6.2.
- 14 No compensation for any damages caused to the earth work by rains, floods or any other natural calamities shall be paid to the contractor. The contractor shall have to make good all such damages at his own cost as per direction of Engineer-in-charge.
- 15 Nothing extra shall be paid for making and maintenance of the service road/ path required for the transportation of the earth/ material etc.
- 16 (a) Before commencement of the earth work the contractor sign the cross section of the existing ground in taken on acceptance thereof. These shall be considered as the final sections of the original conditions of the work before commencement.
- 16 (b) Levels should be taken and entered in Measurement book before commencing the work at an interval not exceeding 15 meters and after finishing the work complete all respect as per MORT&H specification. The finished work will be checked longitudinally as well as in cross section for computing the quantity of earth work as per clause No. 113.3 of MORT&H (road wing) specification (4th revision) or 2001/latest edition.
- 17 The earth obtained from the cutting will be used by the agency in filling upto the economical lead and that quantity will not be payable. The decision of the Engineer-in-Charge will be final regarding deviation of the economical lead.
- 18 The department will be at liberty to withdraw the item of earth work to reduce it to any extent and no claim what so ever will be entertained on this account.
19. Before laying any construction layer GSB, sub grade or base course, earth work on berms, if it is to be done by the agency against this agreement, should be completed in all respect simultaneously. Before taking work of any next layer, earth work on berms should be completed, Payment of any construction layer will be recommended only when earth work on berms are completed.

TECHNICAL CONDITION (Bituminous works)

1. The work will be carried out as per MORT&H specification for roads & Bridges works 2001(4th revision)and with up to date amendments of MORT&H specification and latest instructions issued by the Ministry from time to time of work given in the schedules of quantities.

- 2 (a) The Job mix formula will be got tested from CRRRI New Delhi, NIT KKR, PEC Chd, TTI Chd. and testing charges will be borne by the agency. Nothing shall be paid on this account.
2. (b) For item of BM/ DBM/ SDBC work, the contractor shall intimate to the Engineer-in-charge in writing 20 days(twenty days) before the start of work, the job mix formula proposed to be used by him for the work.
3. The contractor will quote the rate of Bitumen Macadam item with 3.3% of bitumen contents. Nothing extra will be paid if job Mix formula warrants more bitumen contents. If density as per Job mix formula comes out to be less 2.2 gm/CC, rate will be reduced accordingly & if it is more than 2.2 gm/CC nothing extra will be paid.
4. The contractor will quote the rate of SDBC item with bitumen @5%, by weight of total mixture. Nothing extra will be paid if job Mix Formula warrants more bitumen contents. If density as per Job Mix Formula comes out be less than 2.30 gm/cc, rate will be reduced accordingly & if it is more than 2.30 gm/cc nothing extra will be paid.
5. The contractor will quote the rate of DBM item with bitumen content @4% for 80mm to 100 mm thick DBM and 4.5% upto 75 mm thick by weigh of total mixture. Nothing extra will be paid if Job Mix formula warrants more bitumen contents. If density as per Job mix formula comes out to be less 2.30gm/CC, rate will be reduced accordingly & if it is more than 2.30 gm/cc nothing extra will be paid.
6. The contract will quote the rate of BC item with bitumen @ 5% by weight of total mixture. Nothing extra will be paid if Job mix formula warrants more bitumen contents. If density as per job mix formula comes out to be less than 2.30 gm/cc, rate will be reduced accordingly and if it is more than 2.30 gm/cc nothing extra will be paid.
7. The agency to whom the work is allotted will have to produce original vouchers for all quantities in lieu of purchase of bitumen from approved refinery to the entire satisfaction of the Engineer-in-Charge for ascertaining the genuineness of material. Original voucher will have to be submitted along with bills.
- 8 (a) After filling the depression of the existing road surface and before applying tack coat, the existing levels of the road surface and after construction shall be taken jointly by the authorized representative of the contractor and Engineer at grid of point 10 Mtrs center to center longitudinally in straight reaches but 5 meter at curves as per clause No. 113.3 of MORT&H specification. The cubic contents of the mix laid compacted and finished shall be computed on the basis of the initial and final levels as per formula approved by the Engineer.
- 8 (b) The unit of measurement of Bituminous Macadam, Dense Bitumen Macadam and Semi Dense Bituminous Concrete work will be cubic meters of the Bituminous mix laid, consolidated and finished. This should be determined as under:- Levels shall be taken before and after construction, at grid of points 10m center to center longitudinally in straight reaches but 5 m at curves. Normally, on two lanes road, the level shall be taken at four positions transversally, at 0.75 and 2.75 m from either edge of the carriage way and on single lane roads, these shall be taken at two positions transversally, being at 1.25m from either edge of the carriageway. For multi-lane road, levels are taken at position transversally for each lane at locations specified by the Engineer-in –charge.

Suitable references for the transverse grid lines should be left in the form of embedded bricks on either or by other means so that it is possible to locate the grid points for level measurements after each successive course is laid.

For pavement courses laid only over widening portion, at least one line of levels shall be taken on each strip of widening or more depending on the width of widening as decided by the Engineer-in-charge.

Notwithstanding the above, the measurement may be taken at closer intervals also. If so desired by the Engineer-in-charge, the need for which may arise particularly in the case of estimation of the volume of the material for profile corrective course(leveling course), the average thickness of the pavement course in any area shall be the arithmetic mean of the difference of levels before and construction at all the grid points falling in that, area provided that the thickness of finished work shall be limited to those shown on the drawing in the estimate approved by the Engineer-in-charge writing.

As supplemental to level measurement, the Engineer-in-charge has the option to take cores/holes to check the depth of construction, the holes made the portion cut for taking cores shall be made good immediately after measurements are recorded by contractor by laying fresh mix/material including compacting as required at no extra cost

8 (c) i) The contractor shall provide, install, maintain and operate at his own cost in good working Condition, a weigh bridge of suitable capacity at the site of the Hot Mix plant under the direction of Engineer-in-charge or his representative.

ii) Each truck before loading of the mix shall be weighed on the weigh bridge and its weight shall be recorded under the signature of the authorized representative of the contractor and Engineer-in-charge.

iii) The truck shall again be weighed on the weigh bridge after loading the mix and its weight recorded under the signature of the site representative as per prescribed Proforma.

iv) The volume shall then be worked out by dividing the weight of the mix laid on particular stretch of the road with the average field density of the very particular stretch, the volume thus worked out above shall be considered for payment purpose. For this purpose the average density for the stretch shall be determined by the actual determination of field density by core cutter method. The test will be carried out at the rate of minimum of one test per 250 Sqm area.

v) For the purpose of payment, volume worked out by actual levels as laid down in para 8 (b) and determination of volume by density method as at para 8 (c) (iv) will be considered and the lower value of the two shall be adopted.

vi) In case the contractor/Engineer-In-Charge feels that there are substantial undulation at site and additional material is to be consumed on account of this and if there is a provision in the estimate for undulation/leveling course, the contractor will submit a case/claim of the Engineer-in-charge with full justification alongwith supporting data i.e leveling/surveying done at site etc. before execution & Engineer-in-charge will get the same approved from Superintending Engineer Concerned before execution.

9 Hot mix plant will be so located subject to the approval of the Engineer-in-charge involving such lead in transportation of the mix so as to avoid its segregation and temperature drop excluding specified

limits of MORT&H specification for Road & Bridge works (4th revision) of 2001/latest edition. The maximum lead should not be more than 25 Km.

10. The agency will produce proof of procuring or hiring required machinery as per MORT&H specification(4th revision) of 2001/latest edition or list of all type machinery already in hand required for the work.

11. Unloading of bitumen at plant site will be done in the presence of representative of Engineer. The day -to-day receipt and issue account of bitumen shall be maintained by the representative of Engineer and signed daily by the contractor or his authorized representative on the Proforma given below: -

PROFORMA FOR THE BITUMEN REGISTER

RECEIPT			ISSUES				
Date of Receipt	Qty. Received	Progressive total	Date of consumption	Qty. of Bitumen consumed	Total consumed	Balance in hand	Contract or initial
1	2	3	4	5	6	7	8

DAILY COMPARISION OF ISSUE WITH REQUIREMENTS

J.E.	Item of work for which bitumen consumed	Approx. Qty. of work done	Theoretical requirement of bitumen for work done	Remarks	
				EE/AE	Ex.Eng
9		11		13	14

12. The rate of bitumen/emulsion at the Refinery on the date of receipt of tender shall be considered as base rate. If during execution of the works, the rate of bitumen/emulsion increases or decreases at refinery, the difference in cost shall be paid/recouped from the contractor in the bill as per Clause 47 of condition of contract

13. When the work under one agreement is being executed, the contractor shall not undertake any other work from same hot mix plant without written permission of the Engineer-in-charge and shall also make separate arrangement of bitumen for that work. No contractual agency should be allowed to work from the same hot mix plant against two different contracts at one time. If he wants to start work on new project, he will have to stop the first work & then take permission from concerned EE in writing intimating the balance bitumen available at plant site. EE can give permission in writing only with e-mail to SE/CE concerned. No verbal permission will be considered/ allowed.

14. In case the actual consumption of bitumen is less upto 5% of specified quantity as per relevant specifications, recovery for the quantity less consumed shall be made @ current rate of Bitumen. In case the consumption of bitumen is less by more then 5% of the specified quantity, the matter shall be refer to the employer for decision as to whether the work can be accepted or not. If the employer decides that the work can be accepted, in that case the recovery of the quantity of bitumen less consumed shall be made at double of the current rate of bitumen besides any reduction in rates of that particular item of work, which shall be decided by the employer.

15. The contractor will be bound to procure/ purchase bitumen from the refineries for all bituminous items and will also produce original copies of bills from the Refineries which will be attached with the payment certificates/running bills. The consumption of the bitumen shall also be compared with the quantity of bitumen purchased from the refineries by the contractor. If the contractor fails to produce copies of the bills of purchase of bitumen from the Refineries along with the running bills, no payment in respect of

bituminous items shall be admissible. **The bitumen indent of refinery should be sent to concerned refinery for verification as many fake indents are also available in market.**

16. An undertaking should be taken from the agency during the payment of every bill that:
 - i) He has actually purchased the bitumen.
 - ii) He has used this bitumen on this work only.
 - iii) He has not claimed its cost from any other division/ office or anywhere else.
 - iv) The data submitted by him is totally correct.
 - v) He owns full responsibility for the quality & quantity of bitumen and submission of data.

GENERAL CONDITION

1. Correction of defects: - The Engineer shall give notice to the contractor of any defects before the end of defects liability period and routine maintenance which begins at completion as per definition. The defect liability and routine maintenance period shall be extended as long as defects remain to be corrected. Every time notice of a defect is given, the contractor shall correct the defect within the length of time specified by the Engineer-in-Charge's notice. If the contractor has not corrected a defect within the time specified in Engineer-in-Charge's notice, the Engineer will assess the cost of having the defect corrected and the contractor will pay the amount.
2. The contractor shall have to provide a fields laboratory fully equipped at work site and hot mix plant for conducting all the relevant tests mentioned in the MORT&H specification subject to the approval of the Engineer-in-Charge or his representative. The record of such tests is to be maintained in proper register duly signed by the contractor or his representative, which will become the property of the department. The contractor will bear all the running expenses for conducting such tests. All the tests will be carried in the presence of S.D.E-in-charge of the work. All the entries are to be signed by the contractor, S.D.E and J.E-in-Charge
3. The quality control tests will also be done by the department and the material for such tests will be supplied by the contractor free of cost. In case the material is not found upto the requirement, the same will be rejected.
4. Various quality control operation will be maintained as per clause No.901, 902,903 of MORT&H (Road wing) specified (4th Revision) of 2001/ latest edition as per instruction issued by the MORT&H from time to time upto date.
5. Contractor shall provide suitable measuring arrangement and leveling instruments of latest quality as approved by Engineer-in-Charge at the site of work.
6. No extra payment on account of quality control measure shall be paid to the contractor.
7. The Engineer-in-charge at his discretion can get any type and Nos. of tests carried out from any other approved laboratory for his satisfaction for which all the expenses incurred would be borne by the agency. The result so obtained from the laboratory would be acceptable/ binding to the agency.
8. The contractor shall be required to provide all such materials / equipments at site to conduct fields tests and to ensure that the quality of material/ item shall be according to the prescribed specification and no payment of any kind such tests shall be made to him. In case the material / item is not found upto mark, the same will be rejected.

9. For cement, bitumen, mild steel and similar other material, the essential tests are to be carried out at the manufactures plant or at laboratories other than the site laboratory. The cost of samples, testing and finishing of test certificates shall be borne by the contractor. He shall also furnish the test certificates to the Engineer.
10. Contractor has to submit the bills (Running as well as final bill) for payment alongwith quality control test results conducted as per frequency specified in MORT&H specification. No payment will be made without test result.
11. The contractor will repair the existing failed sub grade/ crust if any before laying LBM/WBM/WMM etc. at his own cost with 300mm depth of earth work of appropriate quality , 500mm GSB & balance BM/LBM/WMM etc. As per existing crust. Efforts will be made to open mouth of GSB at side slopes so that water is drained of. Nothing extra shall be paid on account of this. The cost will be incidental to work and nothing extra is payable.
12. Before executing the work of drain, proper drawing depicting L-section and X-section of drain alongwith its proper disposal will be got approved from Employer in writing.
13. Agency will have to submit to the Engineer-in-charge, the original bills of cement and steel etc. in token of proof of purchase of material alongwith quality control test certificate of manufacture failing which no payment shall be released.
14. Agency will get the material tested from any approved laboratory as directed & whenever required by Engineer in-charge and all liability of testing shall be borne by the agency.
15. The rates are inclusive of cost of traffic management during construction, contractor shall provide road signage, bollards, gunny bags, sheet etc. for safety of traffic during construction period which will be incidental to work. Nothing extra shall be paid on this account.
16. The contractor will supply bills for RCC Hume pipe clearly indicating name of manufacture, date of manufacturing, Lot no etc. These details must be painted on the RCC Hume Pipe. The pipe should be ISI marked. The manufacture should give proof for validity of ISI license. In case of non supply of bills, no payment will be released.
17. The contractor himself will arrange all the material such as bitumen, cement steel. Bricks etc. at his own cost.
18. The riding quality of road after giving treatment of wearing coat will not have roughness more than 2000mm/Km.
19. If at any stage, panel of concrete pavement develops cracks /disintegration during defect liability / maintenance period of 3 years, the whole panel be changed by the contractor at his own cost & nothing extra shall be paid.
20. For all RCC/PSC works 90% of the payment shall be made after the casting and remaining 10% will be released after curing of 28 days and making the site good to the satisfaction of Engineer.
21. The contractor shall erect at least two rooms as certified of approx size 3.6m x 3.6m and 2.7 to 3 m height at locations as decided by site incharge, on start of the work upto completion work. The structure shall be reasonable good appearance to the satisfaction of Engineer-in-Charge with minimum required furniture such as tables, chairs and almirah etc. These structures shall remain the property of contractor and

nothing extra shall be paid to the contractor by department for this facility. Contractor shall disband these structures on completion of work.

22 Contractor will have to produce license for labour to be engaged on for this work from the Labour Enforcement Officer under contractor labour regulation and abolition act 1970 prior to the commencement of the work failing which payment for the work done will not be made.

23. The agency will notify the date of commencement of work or resumption of work in writing to the Engineer-in-Charge at least three days in advance. Any work done without proper notice will not be accepted and paid for.

24. **ACCEPTANCE OF WORK FOR PAYMENT :-** The J.E. (Representative of Engineer) in-charge of the work will regularly inspect the work done by the agency. He will notify the SDE in charge in writing whether the quality of work is done satisfactory and acceptable for payment. In case the quality of work is poor he will inform the SDE the reaches / location where work is of poor quality and cannot be accepted. He will also record his observation in respect of poor quality of work in site order book and get the same noted from agency of his representative. The agency will be held fully responsible for delay and avoiding the submission of reports in time in writing.

The S.D.E. (Representative of Engineer) in charge on receipt of the report will inspect the work, carryout the test satisfy himself about the quality & quantity of work and submit the report to Executive Engineer (Engineer in charge) to writing. The delay or non-submission of report on the part of S.D.E. will be considered an act of omission & commission in performance of his duty. The S.D.E. In-charge will inspect the work before making measurement & entry into M.B. and send a report to Engineer in charge in writing that he has inspected the work and fully satisfied about the quality and quantity. In case he found the work of poor quality, he will notify the agency and inform the Executive Engineer (Engineer in charge) about it. He will also carry out the tests to conform or satisfy his observations. The Executive Engineer (Engineer in charge) on receipt of report from S.D.E. will inspect the work himself and get the required tests done as per specifications. The work will be rejected if any deficiency is found. The agency will be notified for rejected work. The agency will remove the rejected work completely and relay the same. The entire costs of testing, removing and relaying will be borne by the agency. The Engineer in charge will stop the further work if the agency failed to remove the defective work with in 7 days of notifying the defective work by Engineer. A penalty equivalent to the market value. Tender value which ever is higher of defective work will be imposed by Engineer on the agency for failure to rectify the defective work with in 15 days .

25 CONTRACTOR/S SUPERINTENDENCE AND SUPERVISION:- The Contractor shall provide all necessary superintendence during the execution of the works and as long thereafter as may be necessary for the proper fulfilling of the contractor/s obligations under the contract. The Contractor or a competent and authorized agent or representative approved in writing by the Engineer, which approval may at anytime be withdrawn is to be constantly on the work and shall give his whole time to the superintendence of the same.

26 CERTIFICATE OF COMPLETION OF WORKS:-When the whole of the works have been completed and have satisfactory passed any final test that may be prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer accompanied by an undertaking to furnish any outstanding work during the period of maintenance. Such notice and undertaking shall be in writing and shall be deemed

to be a request by the contractor for the Engineer to issue a Certificate of completion in respect of the works. The Engineer shall, within twenty one days of the date of delivery of such notice either issue to the contractor, a certificate of completion stating the date on which in his opinion, the works were completed in accordance with the Contract or give instructions in writing to the Contractor specifying all the works which, in his opinion, requires to be done by the Contractor before the issue of such certificate the Superintending Engineer shall also notify the contractor of any defects in the works affecting completion of the works specified therein. The contractor shall be entitled to receive such Certificate of completion within 21 days of completion to the satisfaction of the Superintending Engineer of the works so specified and making good any defects so notified.

27 DEFECT LIABILITY -CUM- ROUTINE MAINTENANCE:- The Contractor shall be responsible to make good within such period as may be stipulated by the Engineer the defect which may develop or may be noticed during period of defect liability of 36 (Thirty six) period Months from the certified date of completion and which is attributable to the contractor. All notices of such defect shall be given to the contractor promptly. In case the contractor fails to make good the defects, the Engineer may employ other person to make good such defects and all expenses consequent and incidental there to shall be borne by the contractor, The contract shall not be considered as completed until a defect liability clearance certificate shall have been recommended by the Engineer in Charge and duly approved by the Employer stating that the work has been completed and maintained during defect liability period to his satisfaction. The maintenance certificate / completion certificate shall be given by the Superintending Engineer. A defect is any part of the works not completed in accordance with the contract or distressed developed in the work irrespective of any causes.

28. Sale Tax, Income Tax including surcharge and Labour Cess will be deducted from the contractor bills as per the Government Instructions from time to time. Octroi, royalty, toll tax, local tax on the material as well as services and any other tax levied by Central Government/State Government or Local bodies shall be borne by the tenderer

29. In case of any dispute regarding interpretation of any of the above quoted clauses/conditions/ specifications/the decision of Employer will be final and binding on the contractor.

30. STUDY OF DRAWINGS AND LOCAL CONDITIONS;

30.1 The drawings for the works can be seen in the office of the **Executive Engineer, PWD B&R Br.** It should be noted by tenderer/s that these drawings are meant for general guidance only and the Department may suitably modify them during the execution of the work according to the circumstances without making the Department liable for any claims on account of such changes.

30.2 The tenderer/s is/are advised to visit the site of work and investigate actual conditions regarding nature and conditions of soil, difficulties involved due to inadequate stacking space, due to built up area around the site, availability of materials water and labour probable sites for labour camps, stores, godowns, etc. They should also satisfy themselves as to the sources of supply and adequacy for their respective purpose of different materials referred in the specifications and indicated in the drawings. The extent of lead and lift involved in the execution of works and any difficulties involved in the execution of work should also be examined before formulating the rates for complete items of works described in the schedule.

30.3 The Engineer in Charge reserves the right to modify the plans and drawings as referred to in the special data and specifications as also the estimate and specifications without assigning any reasons as and when considered necessary by the Department. The rates quoted by the contractor as may be accepted by the Department will, however, hold good irrespective of any changes, modifications, alterations, additions, omissions in the location of structures and detailed drawings, specifications and/or the manner of executing the work.

30.4 It should be specifically noted that some of the detailed drawings may not have been finalized by the Department and will, therefore, be supplied to the contractor as and when they are finalized on demand. No compensation whatsoever on this account shall be payable by the Department.

30.5 No claim whatsoever will be entertained by the Department on account of any delay or hold up of the work/s arising out of delay in approval of drawings, changes, modifications, alterations additions, omission and the site layout plans or details drawings and design and or late supply of such material as are required to be arranged by the Department or due to any other factor on Departmental Accounts.

31. SETTING OUT WORKS

31.1 The contractor is to set out the whole of the work in consultation with the Engineer or representative of Engineer and during the progress of works to amend on the requisition of the Engineer any errors which may arise there in and provide efficient and sufficient staff and labour thereon. The contractor shall also alter or amend any errors in the dimension lines on level to the satisfaction of the Engineer in Charge or his authorized representative without claiming any compensation for the same.

31.2 The contractor shall provide, fix and be responsible for maintenance of all stakes, templates, profiles, land marks, points, burjies, monuments, center line pillars, reference pillars, etc. and shall take all necessary precautions to prevent their being removed altered or disturbed and will be responsible for the consequence of such removal, alterations or disturbances and for their efficient reinstatement.

31.3 The contractor shall protect and support, as may be required or as directed by the Engineer, building, fences, walls, towers, drains, road paths, waterways, foreshores banks, bridges, and overhead electric lighting, the telegraphs/telephones and crossing water service main pipes and cables and wire and altogether matters and things of whatever kind not otherwise herein specified other than those specified or directed to be removed or altered which may be interfered with or which is likely to be affected disturbed or endangered by the execution completion of maintenance of the works and shall support provided under this clause to such cases as directed by the Engineer. No payment shall be made by the Department to the contractor for these works on account of delay for re-arrangement of road traffic or in the contractor having to carry out the short lengths and in such places as per conditions and circumstances may warrant. These will not form the basis of any claim and or dispute for compensation of any kind.

32. SERVICE ROADS

32.1 The contractor/s shall make his/their arrangements for service roads, paths etc. for carrying his/their tools and plants, labour and materials etc. and will also allow the Department use of such paths and service roads etc. for plying its on vehicles free of cost. The tenderer/s will be deemed to have included the cost of making any service roads, roads or paths, etc., that may be required by him/them for plying his/their vehicles for the carriage of his/their man and materials, tools, plants and machinery for successful completion of the

work. Similarly, any other feeder road connecting any of the existing roads will be made by the contractor at his/their own cost including any compensation that may be required to be paid for the temporary occupation or usage of Govt. and or private land without in anyway involving the Department in any dispute for damage and /or compensation.

33. NIGHT WORK

33.1 If the engineer is satisfied that the work is not likely to be completed in time except by resorting to night work, he may order without confirming any right on the contractor for claiming any extra payment for the same.

34. DISPOSAL OF SURPLUS EXCAVATED MATERIALS

34.1 The contractor shall at all time keep the site free from all surplus earth, surplus materials, and all rubbish which shall arise from the works and should dispose of the surplus excavated materials as ordered by the Engineer In Charge failing which it will be done at the cost of contractor and cost will be deducted from his dues.

34.2 The contractor shall within 15 days of completion of entire works remove all unused and surplus materials tools and plants staging and refuge or other materials produced by his operations and shall leave the site in a clear and tidy conditions.

35.0 SITE INSPECTION REGISTER

35.1 A site inspection register will be maintained by the Engineer or his representative in which the contractor will be bound to sign day to day entries made by the Engineer or his representative. The contractor is required to take note of the instructions given to him through the site inspection register and should comply with the same within a reasonable time. The contractor will also arrange to receive all the letters etc. issued to him at the site of works.

35.2 The contractor shall, from time to time (before the surface of any portion or the site is interfered with or the work thereon begun) take such levels as the Engineer may direct in his presence or any person authorized by him in writing. Such levels approved and checked by him or such authorized persons shall be recorded in writing and signed by the contractor and shall form the basis of the measurements. Immediately before any portion of the work, below water level is started the existing water levels are to be taken and recorded in a similar manner.

35.3 The contractor shall have to make and maintain at his own cost suitable approach road and path etc. for proper inspection of the various works. He shall also provide all facilities as required by the Engineer in Charge such as ladder and other appliances for satisfactory inspection of the works and places where materials for the work are stored or prepared.

36. OPENING UP OF WORK OR MATERIALS FOR INSPECTION OR TEST:

36.1 Should the engineer or any representative consider it necessary for the purpose of enabling inspection of tests analysis to be made to verify or ascertain the quality of any part of the works or of any materials, the contractor shall as and when required by the Engineer or his representatives open up the work or materials for inspection or test or analysis, pull down or cut into any part of the work to make such openings, into under or through any part of the works as may be directed and shall/provide all things facilities which in the opinion of the Engineer or his representative are necessary and essential for the

purpose of inspection or test or analysis of the works or of any part thereof or the materials, or of workmanship and the contractor shall close up, cover, rebuild and make good the whole at his own cost, as and when directed by and to the satisfaction of Engineer in charge.

37 PROVISION OF LIGHT SIGNALS ETC.

37.1 The contractor/s shall make such provision for lighting the works, materials and plant and provide all such marks and lights, signals and other appliances as may be necessary or as may be required by the Engineer or other responsible authorities during the execution completion and maintenance of the work and shall provide all labour, stores, etc., required for their efficient working and use at any time of day or night. He/they shall also provide all arrangement of every description of watching and maintenance required in connection with foregoing and all other services for protection of any securing all dangerous places whether to the contractor/s workmen or to other persons and or vehicular traffic until the work is certified by the Engineer in Charge to have been completed and taken over in accordance with the contract.

37.2 The contractor/s will provide upon the works to the satisfaction of the Engineer and at such, places as he may nominate, proper and sufficient life saving, fire fighting and first aid appliances which shall at all times be available for use.

38. LABOUR CAMP

38.1 Land for setting up a workshop by the contractor or for his labour camp or for any other purpose, shall have to be arranged by the contractor at his own cost and under his own arrangements. The contractor, however, will be permitted to make use of the PWD land to the extent that can be made available to him free of cost, by the Department in the vicinity of the site of works. The contractor/s shall at all times be responsible for any damage or trespass committed by his agent and workmen for carrying out the work.

39. The Engineer in Charge may recommend to the concerned authorities the issue of necessary transport permits for the work. The contractor shall, however, furnish full justification for the above facilities, to enable the Department to address the State Government or other authorities in this connection. The contractor shall also maintain regular log book of receipts and issue of the materials to work, if so required by the Civil Authorities. No claim would, however, be entertained by the non-issue of any priority permits or owing to any interruption in supply.

40. No claim for idle labour and or idle machinery etc. on any account will be entertained. Similarly no claim shall be entertain for business loss or any such loss.

41. TECHNICAL CONDITION FOR P.H. ITEMS.

P.H. fixtures.

1. The P.H. fixtures such as seats, urinals, Cistern, Sinks etc. shall be of reputed manufacturers such as Hindware, Periware etc. shall be used. Preferably Hindware will be used.
2. The G.I. pipe to be used of 'B' Class of reputed manufacturers such as Tata/Jindal. The weight of pipe per meter shall be as per recommendation of the manufacturers.
3. The P.V.C. pipes shall be I.S.I. marked and reputed brand such as Finolex, Prince & Supreme etc.
4. The other fixture of C.P. brass as mentioned in the Schedule shall be I.S.I. marked or of reputed manufacturers such as Jaguar /Marc or equivalent duly approved by Engineer-In-Charge.
5. The item of H.C.I. as mentioned in the Schedule shall be as per Haryana P.W.D. Specification.

6. In this contract schedule of rates only essential portion of items has been written, for Public Health item, but it will deem to cover only the entire items as fully described in Haryana PWD Schedule of Rates - 1988.
7. The Engineer-in-Charge shall be entitled to order against any item of work shown in this contract schedule of rates here-in-after called the "Schedule" to any extent and without any limitation whatsoever required in his opinion for the purpose of work irrespective of the fact that the quantities are omitted altogether in the schedule to be carried out.

Conditions for Public Health Works

1. The work will be carried out strictly in accordance with the PWD Book of specification addition 1990, which will form a part and parcel of this contract agreement.
2. In this contract schedule of rates only essential portion of item has been written, but it will deem to cover the entire items as fully descry bed in Haryana PWD schedule of rates-1988.
3. The Engineer-in-Charge shall be entitled to order work against any item of work shown in this contract schedule of rates hereinafter called the schedule, to any extent and without any limitation where ever as may be required in his opinion for the purpose of work, Irrespective of the fact that the quantities are omitted all together in the schedule or are shown more or less than the work ordered to be carried out.
4. The rate for any item of work not provided in the Haryana PWD schedule of rates 1988 but executed at site will be decided by the competent authority and the decision will be binding upon the contractor.
5. All the items in this contract schedule or rates are subject to the footnotes given in the Haryana PWD schedule or rates of rates 1988 regarding these items.
6. Approximate quantities are given in this contract schedule of rates and may vary at the time of execution of works. The payment will however be made for the actual work done by the contractor. No extra claims whatsoever will be admissible to the contractor on account of v variation alternation or deletion of any items over the quantities depicted in this contract schedule of rates.
7. All amendments issued on the Haryana PWD Schedule of Rates-1988 upto the date of opening of tenders will be applicable on the contract schedule of rates.
8. The contractor will have to make his own arrangement of bricks.
9. Any other items not included in this contract schedule of rates and got done at site of work will be paid according to Haryana PWD schedule of rates 1988 accepted in the allotment letter approval issued by the competent authority against this agreement.
10. No claim will be entertained from the contractor in case of any omission in description rates or unit which might have occurred in any of these items taken in this schedule while comparing this schedule or on account of typing comparison or overwriting in case of any error the same shall be rectifiable at any stage as per Haryana PWD schedule of rates 1988 alongwith the amendments on the same received from time to time.

11. The premium should be quoted above or below the contract schedule of rates and no condition should be given in case any condition is tendered this will be considered as Null and void and only the premium or discount quoted by the tenderer shall be accepted in case any tenderer refuses to accept this his earnest money will be forfeited.
12. The contractor shall submit the test certificate if the steel brought by him to site of work also the sample of steel may be got tested by the Engineer-in-Charge. The steel shall be ISI marked.
13. No premium shall be payable on the allotted rates of NS items by the competent authority.
14. Inspection of SW pipe & RCC NP3 pipe will be carried out by the Engineer-in-Charge or his representative before the same are brought at site for use & SW pipe & RCC NP3 pipe will be confirming to all the tests including optional test as per IS 651-1992 for SW pipe and 458-1988 for RCC NP3 pipe with upto date amendment.
15. The measurement of SW pipe & RCC NP3 pipe sewer provided on through rate basis will be done by at least 2 No J.Es to be nominated by Engineer-in-Charge.
16. Each manhole cover and frame shall have the trade mark of manufacturer month and year alongwith class and work and shall be ISI mark.
17. All taxes such as royalty municipal tax octroi charges and any other kind of taxes shall be paid by the contractor and are included in the rate quoted by the contractor separately for which no premium will be allowed.
18. As and when contractor gives condition that arrangement of water shall be made by the department, it shall be deemed that all the charges incurred thereon shall be borne by the department and recovery on the total work done shall be made from him.
19. Rate to be quoted by the contractor for each N.S item for complete Job including all taxes, carriage etc. Nothing extra on any account shall be paid.
20. Payment will be made according to the actual work done by the contractor.
21. Towel rails and bottle traps will be fitted after the written approval of Engineer-in-Charge.

Executive Engineer,
Provincial Division.....,
PWD B&R,

Technical Conditions of EI Work to be attached

TECHNICAL CONDITION FOR EI WORK

1. The recovery of the pipe already laid will be made on measurement rate basis or point rate basis or on actual expenditure basis which ever is on high side. In case of Departmental work, 10% supervision charges shall also be added.
2. Conduit pipe where already laid for wiring purpose will be delivered to the contractor in absolutely clean condition with round inspection boxes duly painted, covered and whole system tested. After the conduit system is handed over to the contractor to whom the work is allotted, he will be responsible for its upkeep.
3. During execution of work, if the contractor does not lay pipe and its accessories in the slab within time prescribed by the Engineer-in-Charge of the work, the Deptt. can then lay the said pipe-departmentally at contractors risk and cost without operating the clause 2 and 3 of the contract agreement.
4. Separate conduit pipe for power plug with independent circuit wires shall be laid.
5. Multi plugs shall be provided in all the buildings.
6. C-Series MCB will be provided for air conditioner wiring and no extra payment will be made and only one make of MCB's will be used in whole work.
7. Vertical type of MCB distribution boards will be provided wherever required as per design.
8. The contractor is also allowed to use MCBs duly ISI marked of more than 9 KA breaking capacity for which no extra payment will be made.
9. For HSR item no.31.12 (D), 31.15 the make of enclosure will be same as that of MCB of standard size having thickness 1.6 mm and 1.2 mm in case of TPN and SPN enclosure respectively.
10. All MCCBs upto 220 Amp will have 25 KA minimum breaking capacity and above 220 amp. MCCBs will have 50 KA minimum breaking capacity. All MCCBs will have magnetic thermal release and rotary operating mechanism duly interlocked and only one make of MCCBs shall be used in whole work. No extra payment on this account shall be made.
11. The thickness of M.S. Sheet of switch boxes should be of 16 gauges for which no extra payment will be made.
12. The fan boxes sheet should be 16 gauge and anodized for which no extra payment will be made.
13. The contractor shall install the material from the list of approved electrical material appended in the NIT. Material not covered in the list will be used as per HSR-1988, and PWD Specifications-1990.
14. The contractor must ensure preparation and submission of pipe diagram, wiring diagram, key diagram etc. as required vide PWD Specifications Chapter No. 31.6.
15. Where ISI recommends multi stranded conductor of cable, cable with multi- stranded conductor only will be used on work.

16. Rates should be quoted by the tenderer both in word and in figure, in case of any difference between the two, the lowest of the same shall be considered as final rate.
17. The rates of bus bar includes the cost of all Labour and material required to complete the job in all respect including thimbles etc. of the same material as that of bars. The support for bars will be made of porcelain. No extra payment in this regard will be given.
18. The tenderer must either be 'A' Class Electrical Contractor enlisted with Haryana PW(B&R) Deptt. or he must sublet the electrical work to a sub contractor possessing the above qualification. The Sub contracting will be done with the written approval of Superintending Engineer, Elect. Circle PW(B&R) Deptt., Karnal or Executive Engineer, Elect. Divn. PW(B&R) Deptt. (concerned division) as per competency.
19. The contractor must employ the following staff while carrying out work:-

List of Key Personnel to be deployed on Contract Work.

(Reference CI 4.5 (B) (b))

Sr. No.	Agreement Amount.	Key personal required to be Employed by the contractor.	Recovery rate in case non –Employment.
1	Upto Rs. 1.00 crore	One Electrical Engineer with diploma in Electrical Engineering with 5 years experience of building construction.	Rs. 30,000/- per month
2	Above Rs. 1.00 cr. to Rs. 5.00 cr.	One Electrical Engineer with degree in Electrical Engineering with 2 years experience or Diploma in Electrical Engineering with 5 years experience in building construction.	Rs. 50,000/- per month
3	Above Rs. 5.00 cr.	One Electrical Engineer with degree in Electrical Engineering with 5 years experience in building construction	Rs. 75,000/- per month for Civil Engineer.

20. The Electrical part of bill of quantity of the agreement will be got executed by and under the supervision of Executive Engineer, Elect. Division PWD B&R Br., (concerned division) and all the running payment of electrical works will be made by him. However, copy of final bill will be sent to Executive Engineer (Civil) to include in the final bill. The over all technical supervision of electrical work shall be of Superintending Engineer Elect. Circle PWD B&R Br., Karnal and any technical instruction given by him will have to be adhered to strictly by the contractor.

21. All the street light fittings, bulbs and cables will be got inspected by the contractor at the works/Go down of the manufacturer before installation at site. A certificate will also be produced/ submitted by the contractor about the authenticity of purchase of above material from the authorized source.
22. Only HYLAM make ISI make (I.S.2036-1995) white Bakelite sheet will be used without any extra cost.
23. The rates mentioned in the NIT are for complete item including cost of all accessories, material, labour, tool plants, water electricity bills etc. Unless otherwise specified. No extra payment for the same shall be made.
24. The minimum size of MS control switch boards for controlling one fan point and one light point shall not be less than 20cm x 25cm x 10cm.
25. The MS box for telephone, Intercom and Bell push shall be installed of size 100mm x 100mm x 60mm in place of 75mm x 75mm x 60mm.
26. The tender having ambiguous/confusing rates and conditions shall be summarily rejected.
27. The quantity/amount of NIT can be increased or decreased.
28. No Road cut charges shall be paid.
29. The contractor shall install two number check nuts and one No. PVC threaded Bush for each pipe in MS inspection boxes. The contractor shall also install PVC flanged bush in the junction boxes for each pipe. No extra payment on this account will be made. The contractor shall quote the rates accordingly.
30. "Labour cess and service tax as applicable from time to time will be deducted from the Gross amount of the bill" of the contractor.
31. The contractor should quote the rates keeping in view above conditions/ specifications.

L.T. panel: -

General: - This distribution board shall be fabricated out of 14 gauge sheet steel cubical type suitable for floor mounting end or dead front type. Suitable rubber gaskets shall be provided between all opening and joint to make the distribution board dust, moisture and vermin proof. The distribution board shall be suitable for indoor location and shall consist of the bus bar chambers both vertically and horizontally and the cable entry for the distribution shall be from bottom. Distribution board will consist of a number of vertical sections. Each vertical section shall be divided in to a few standard sizes of the compartment. The equipment for the various incoming and out going feeders shall be housed in a separate compartment. Each compartment door of distribution board shall be provided with inter locking arrangement with the handle of the respective switches/ MCCB such that the door can not be opened unless the switches are in the off position. Vertical cable entry shall be provided on each section of the distribution board for cabling purpose. Continues bus bar of copper shall be provided at the bottom along the entire length, cable compartment with concealed hinged front door will be fully segregated from the main horizontal/ vertical bus bar of equipment module. The distribution board shall be painted with a suitable enameled shade after

necessary primary treatment. The distribution board shall be suitable for operation on 415 volts 3 phase 50 cycles per second A.C. supply system.

Bus Bar: - The high conductivity copper bus bar provided in the chambers shall be duly tinned and insulated and rigidly supported at the short intervals by strong 12mm thick non inflammable hylam partitions. The partitions shall be so designed so as to with stand the stress, which can normally occur on short circuits. Further, The bus bars and links shall be of flat copper dully tinned so that the contract between bus bars shall be easily accessible from front for any connections and inspection etc.

The bus bars chamber should have of strong metal having no possibility of any dents, due to accidents and damage, which could result into electrical fault. Bus bars chamber shall be of unit type construction and have standard flanges opening at the top and bottom on both side so that any modification, extension can be easily effected at the site.

Test Certificate: - A test certificate from the manufacturer shall be handed over to the department before installation of the panel specifying that the panel conform to relevant ISS/ PWD specifications.

Wiring Diagram: - After completion of the work complete diagram showing connections to the various equipment on the board is to be prepared by the contractor and to be submitted to the department along with final bill of the work. In case contractor fails to supply the diagram amount @ 0.5% of the work executed shall be deducted from the contractor's final bill.

Connection: - Inter connections from bus bar chamber to the different molded case circuit breaker / air circuit breaker should be through solid copper bars of the required capacity duly tinned and insulated for which no extra payment will be made.

<u>LIST OF APPROVED MAKES OF ELECTRICAL ACCESSORIES AND ITEMS.</u>		
SR.NO.	NAME OF ITEMS	NAME OF BRANDS.
1.	(A)Electrical accessories, Button Holder, Pendent Holder, Ceiling rose, Bellpush, Switches and sockets etc.(ISI Marked).	Anchor Penta, SSK (PENTA)
	(B) Modular accessories	Acchor(Wood), ABB(Classiq), Lagrand(Mosaic), North West.
2.	Bakelite sheet (only white in colour).	Hylem make (ISI marked) as per IS 2036-95
3.	MS Conduit pipes.(I.S.I Marked)	BEC, NIC, STEEL KRAFTS.
4.	Call Bell and Buzzer.	Anchor,Leader,Rider.
5.	PVC wires (Copper condutor) (ISI Marked)	Grandlay, Havell's, Kalinga, National, Plaza, ECKO, Bonton.
6.	PVC underground cable with aluminium conductor (ISI marked)	Brucab, CCI, Grandlay, Havell's,ICC,ICL Kalinga, National,Plaza.
7.	HT-XLPE cables with AI. Conductor (ISI Marked).	CCI, Gloster, Havell's,ICC, ICL, Incab, Plaza.
8.	LT-XLPE cables with AI. Conductor (ISI Marked).	CCI, (Tropothen-X) Grandlay, Havell,s, Incab, ICL, ICC, Plaza.
9.	Telephone Wire	Delton
10.	PVC pipe 6Kg. Pressure (ISI Marked).	AKG,Diplast,Kalinga, Polypack.
11.	GI pipe and MS pipe (Medium) (ISI Marked)	Hindustan, Jindal, Parkash, Ravindra, Tata.
12.	I.C Switches.	Category-A: GE, L&T, Siemens Category-B:(ISI Marked): Havell's, Standard, Zeta, C&S
13.	Change over switches	Standards, C&S
14.	MCB's (ISI Marked).	GE, Havell's, Indo- Kopp, L & T, Load Kontakt, Standard, Siemens, C&S, ABB.
15.	Enclosures (Standard Size only).	Makes as per MCB's (But in case of Indo-Kopp it will be Indo-Asian)
16.	ELCB's/ RCCB's (ISI Marked).	GE, Havell's , Load Stop, L&T, Siemens,
17.	MCCB's	GE, Havell's, L&T, Siemens. Schneider

		Electric, C&S & ABB.	
18.	Enclosures for MCCBs	BCH	
19.	Poles.	i) M.S. Pole:-	Manufactured by any firm as per ISI Marked sectional lengths and strictly according to IS specifications.
		ii) G.I. Pole:-	Philips, Bajaj, Surya Roshni
		iii) High Mast:-	Philips, Bajaj, Surya Roshni
20.	PVC Tee Joints. PVC asting & trunking for computer wiring	M-Seal. AKG	
21.	Ceiling fans (Double ball bearings).	Bajaj, Crompton, Khaitan, Orient, Usha.	
22.	Exhaust Fans (Heavy Duty).	Alstom, Bajaj, Crompton, Khaitan, Orient.	
23.	Indoor tube light fittings.	Bajaj, Crompton, GE, Philips.	
24.	Tubes/ Bulbs (ISI Marked).	Bajaj, Crompton, GE, Mysore, Philips.	
25.	OUTDOOR Street / Flood Light Fittings.	Bajaj, Crompton ,GE, Philips.	
26.	CFL and T-5	Halonix, Sanghu Energy saving system, Sangwan Energy System.	
27.	Solar CFL street light	Halonix	
28.	L.T. Panel	C&S Adhunik, Standard, Havells, BCH	
29.	ACB's	GE, L&T, Siemens, Schineider Electric.	
30.	OCB's & VCB's.	Alstom, Crompton, Siemens.	
31.	TRANSFORMERS.	Alstom, Bharat Bijlee, Kirloskar, Crompton, NGEF, Voltamp.	
32.	GENERATORS:	a) Engines: Cummins, Greaves cotton, Kirloskar, Ruston.	
		b) Alternator: Crompton, Jyoti, Kirlosker, NGFC , Stamford,	
33.	Energy Meter/ Sub Meter.	As per approved list of HVPN.	

SECTION 6
FORM OF BID

FORM OF BID

Description of the Works :

To : **Employer**

Address

1. We offer to execute the Works described above and remedy any defects therein in conformity with the conditions of Contract, specification, drawings, Bill of Quantities and Addenda for the sum(s) of

(_____)

2. We undertake, if our Bid is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the document.

3. We agree to abide by this Bid for the period of *_____ days from the date fixed for receiving the same, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

4. Unless and until a formal Agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.

5. We understand that you are not bound to accept the lowest or any tender you may receive.

Address

Witness

Address

Occupation

SECTION 7
BILL OF QUANTITIES

BILL OF QUANTITIES

Preamble

1. The Bill of quantities shall be read in conjunction with the instructions to Bidders, Conditions of contract, Technical Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and process tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates as the Engineer may fix within the terms of the Contract.
3. The rates and prices tendered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the Contract, include all constructional plant, labour, supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out of implied in the Contract.
4. The rates and prices shall be quoted entirely in Indian Currency.
5. A rate or price shall be entered against each item in the Bill of Quantities, whether quantities are stated or not. The cost of Item against which the contractor has failed to enter a rate or price of price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
6. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no Items are provided the cost shall be deemed to be distributed among the rates and prices entered for the related Item of work.
7. General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. References to the relevant sections of the contract documentation shall be made before entering rates of prices against each item in the Bill of Quantities.
8. The method of measurement of completed work for payment shall be in accordance with the specification for Road and Bridge Works published by the Ministry of Surface transport (latest edition).
9. Errors will be corrected by the Employer for any arithmetic errors pursuant to clause 29 of the Instructions to Bidders.
10. Rock is defined as all materials which, in the opinion of the Engineer, require blasting, or the use of metal wedges and sledgehammers, or the use of compressed air drilling for its removal, and which cannot be extracted by ripping with a tractor of at least 150 Km with single rear mounted heavy duty ripper.

BILL OF QUANTITIES

Name of work: _____

Sr. No.	Description of item with brief specification and reference to book of specification	Qty.	Unit	Rate to be quoted by the contractor / society		Amount
				In figure	In words	

Note:-

1. Item for which no rate or price has been entered in will not be paid for by the employer when executed and shall be deemed covered by the other rates and prices in the bill of quantities (Refer : GCC Clause 43.3(a)).
2. Unit rates and prices shall be quoted by the bidder in Indian rupee [ITB clause 14.1].
3. Deleted
4. Deleted

DECLARATION

I/we clearly understand that I/we am/are not entitled to any other payment on any account whatsoever except the quoted rates for fully completed job.

Signature of Tenderer

SECTION 8
SECURITIES AND OTHER FORMS

BID SECURITY (BANK GUARANTEE)

WHEREAS, _____ [NAME OF BIDDER] (hereinafter called "the Bidder") has submitted his Bid dated _____ [date] for the work of _____ [name of Contract hereinafter called "the Bid"].

KNOW ALL PEOPLE by these presents that We _____ [name of Bank] of _____ [name of country] having our registered office at _____ [name of Employer] (hereinafter called "the Employer") in the sum of _____ * for which payment well and truly to be made to the said employer the Bank itself, his successors and assigns by these presents.

SEALED with the common seal of the said Bank this _____ day of _____, 20

THE CONDITIONS of this obligation are;

(1) If after Bid opening the Bidder withdraws his bid during the period of Bid validity specified in the Form of Bid .

OR

(2) If the Bidder having been notified to the acceptance of his bid by the Employer during the period of Bid validity:

(a) fails or refuses to execute the form of Agreement in accordance with the Instructions to Bidders, if required; or

(b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders;

or

(c) does not accept the correction of the Bid Price pursuant to Clause 27.

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or any of the three conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date _____ ** days after the deadline for submission of Bids or such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE _____ SIGNATURE _____

WITNESS _____ SEAL _____

[Signature, name and address]

* The Bidder should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 16.1 of the Instructions to Bidders.

** 45 days after the end of the validity period of the Bid. Date should be inserted by the employer before the Bidding documents are issued.

PERFORMANCE BANK GUARANTEE

To

_____ [name of Employer]
_____ [address of Employer]

WHEREAS _____ [name and address of Contractor] (hereafter 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 a recognized bank for the sum specified therein as security for compliance with his obligation 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]* _____ (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 your 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 until 28 days from the date of expiry of the Defect Liability Period.

Signature and Seal of the guarantor _____
Name of Bank _____
Address _____
Date _____

* An amount shall be inserted by the Guarantor, representing the percentage the Contract Price specified in the Contract including additional security for unbalanced Bids, if any and denominated in Indian Rupees.

**BANK GUARANTEE FOR ADVANCE PAYMENT
(Deleted)**

To

_____ [name of Employer]
_____ [address of Employer]
_____ [name of Contractor]

Gentlemen:

In accordance with the provisions of the Conditions of Contract, sub-clause 51.1 (“Advance Payment”) of the above mentioned Contract, _____
[Name and address of Contractor] (hereinafter called “the Contractor”) shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ [amount of Guarantee]* _____ [in words].

We, the _____ [bank of financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ [name of Employer] on his first demand without whatsoever right of obligation on our part and without his first claim to the Contractor, in the amount not exceeding _____ [amount of guarantee]* _____ [in words].

We further agree that no change or addition to or other modification of the terms of the Contract or Works to be performed there under or of any of the Contract documents which may be made between _____ [name of Employer] 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.

The guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ [name of Employer] receives full repayment of the same amount from the Contractor.

Your truly,

Signature and Seal : _____
Name of Bank/Financial Institution: _____
Address: _____
Date: _____

* An amount shall be inserted by the Bank of Financial Institution representing the amount of the Advance Payment, and denominated in Indian Rupees.

INDENTURE FOR SECURED ADVANCES
FORM 31

(for use in cases in which the contract is for finished work and the contractor has entered into an agreement for the execution of a certain specified quantity of work in a given time)

This indenture made the _____ day of _____, 20____ BETWEEN _____ (hereinafter called the contractor which expression shall where the context so admits or implies be deemed to include his executors, administrators and assigns) or the one part and the Employer of the other part.

Whereas by an agreement dated _____ (hereinafter called the said agreement) the contractor has agreed.

AND WHEREAS the contractor has applied to the Employer that he may be allowed advanced on the security of materials absolutely belonging to him and brought by him to the site of the works the subject of the said agreement for use in the construction of such of the works as he has undertaken to executive at rates fixed for the finished work (inclusive of the cost of materials and labour and other charges.)

AND WHEREAS the Employer has agreed to advance to the Contractor the sum of Rupees _____ on the security of materials the quantities and other particulars of which are detailed in Accounts of Secured Advances attached to the Running Account bill for the said works signed by the Contractor on _____ and the Employer has reserved to himself the option of making any further advance or advances on the security of other materials brought by the Contractor to the site of the said works.

Now THIS INDENTURE WITNESSETH that in pursuance of the said agreement and in consideration of the sum of Rupees _____ on or before the execution of these presents paid to the Contractor by the Employer (the receipt where of the Contractor doth hereby acknowledge) and of such further advances (if any) as may be made to him as a for said the Contractor doth hereby covenant and agree with the President and declare as follows :

- (1) That the said sum of Rupees _____ so advanced by the Employer to the Contractor as aforesaid and all or any further sum of sums advanced as aforesaid shall be employed by the Contractor in or towards expending the execution of the said works and for no other purpose whatsoever.
- (2) That the materials details in the said Account of Secured Advances which have been offered to and accepted by the Employer as security are absolutely the Contractor/s own propriety and free from encumbrances of any kind and the contractor will not make any application for or receive a further advance on the security of materials which are not absolutely his own property and free from encumbrances of any kind and the Contractor indemnified the Employer against all claims to any materials in respect of which an advance has been made to him as aforesaid.
- (3) That the materials detailed in the said account of Secured Advances and all other materials on the security of which any further advance or advances may hereafter be made as aforesaid (hereafter called the said materials) shall be used by the Contractor solely in the execution of the said works in accordance with the directions of the Engineer.

Signaturer of Tenderer

E.E.

(4) That the Contractor shall make at his own cost all necessary and adequate arrangements for the proper watch, safe custody and protection against all risks of the said materials and that until used in construction as aforesaid the said materials shall remain at the site of the said works in the Contractor/s custody and on his own responsibility and shall at all times be open to inspection by the Engineer or any officer authorized by him. In the event of the said materials or any part thereof being stolen, destroyed or damaged or becoming deteriorated in a greater degree than is due to reasonable use and wear thereof the Contractor will forthwith replace the same with other materials of like quality of repair and make good the same required by the Engineer.

(5) That the said materials shall not be in any account be removed from the site of the said works except with the written permission of the Engineer or an officer authorized by him on that behalf.

(6) That the advances shall be repayable in full when or before the Contractor receives payment from the Employer of the price payable to him for the said works under the terms and provisions of the said agreement. Provided that if any intermediate payments are made to the Contractor on account of work done than on the occasion of each such payment the Employer will be at liberty to make a recovery from the contractor/s bill for such payment by deducting there from the value of the said materials than actually used in the construction and in respect of which recovery has not been made previously, the value of this purpose being determined in respect of each description of materials at the rates at which the amounts of the advances made under these presents were calculated.

(7) That if the Contractor shall at any time make any default in the performance or observance in any respect of any of the terms and provisions of the said agreement or of these presents the total amount of the advance or advances that may still be owing of the Employer shall immediately on the happening of such default be repayable by the Contractor to be the Employer together with interest thereon at twelve percent per annum from the date or respective dates of such advance or advances to date of repayment and with all costs, charges, damages and expenses incurred by the **Employer** in or for the recovery thereof or the enforcement of this security or otherwise by reason of the default of the Contractor and the Contractor hereby covenants and agrees with the **Employer** to repay and pay the same respectively to him accordingly.

(8) That the Contractor hereby charges all the said materials with the repayment to the Employer of the said sum of Rupees _____ and any further sum of sums advanced as aforesaid and all costs, charges, damages and expenses payable under these presents

PROVIDED ALWAYS and it is hereby agreed and declared that notwithstanding anything in the said agreement and without prejudice to the power contained therein if and whenever the covenant for payment and repayment herein before contained shall become enforceable and the money owing shall not be paid in accordance therewith the **Employer** may at any time thereafter adopt all or any of the following courses as he may deem best:

(a) Seize and utilize the said materials or any part thereof in the completion of the said works on behalf of the contractor in accordance with the provisions in that behalf contained in the said agreement debiting the contractor with actual cost of effecting such completion and the amount due to the contractor with the value of work done as if he had carried it out in accordance with the said agreement and at the rates thereby provided. If the balance is against the contractor, he is to pay same to the **Employer** on demand

- (b) Remove and sell by public auction the seized materials or any part thereof and out of the money arising from the sale retain all the sums aforesaid repayable or payable to the **Employer** under these presents and pay over the surplus (if any) to the Contractor.
- (c) Deduct all or any part of the money owing out of the security deposit or any sum due to the Contractor under the said agreement.
- (9) That except in the event of such default on the part of the contractor as aforesaid interest on the said advance shall not be payable.
- (10) That in the event of any conflict between the provisions of these presents and the said agreement the provisions of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents the settlement of which has not been here-in-before expressly provided for the same shall be referred to the Employer whose decision shall be final and the provision of the Indian Arbitration Act for the time being in force shall apply to any such reference.

Letter of Acceptance

(Letterhead paper of the Employer)

_____ (Date)

To

_____ (Name and address of the Contractor)

Dear Sirs,

This is to notify you that your Bid dated _____ for execution of the _____ (name of the contract and identification number as given in the Instructions to Bidders for the contract Price of Rupees) _____ (_____) (amount in words and figures), as corrected and modified in accordance with the Instructions to Bidders¹ is hereby accepted for and on behalf of Governor of Haryana. You are requested to sign a copy of the acceptance letter and forward to us.

You are hereby requested to furnish Performance Security, in the form detailed in Pare 34.1 of ITB for an amount equivalent to Rs. _____ within 21 days of the receipt of this letter of acceptance valid up to 28 days from the date of expiry of defects Liability Period i.e. up to _____ and sign the contract, failing which action as stated in Para 34.3 of ITB will be taken.

Yours faithfully,

(Signature, Name and title of signatory authorized
to sign on behalf of Employer)

¹. Delete “corrected and” or “and modifie4d” if only one of these actions applies. Delete as corrected and modified in accordance with the Instructions to Bidders, if correction or modifications have not been affected.

². To be used only if the Contractor disagrees in his Bid with the Adjudicator proposed by the “Instructions to Bidders.”

Issue of Notice to proceed with the work

(Letterhead of the Employer)

To _____(Date)

_____(Name and address of the Contractor)

Dear Sirs,

Pursuant to your furnishing the requisite security as stipulated in ITB clause 34.1 and signing of the Contract for the construction of _____
_____ at a Bid Price of
Rs. _____

You are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully,

(Signature, name, and title of signatory authorized to sign on behalf of Employer)

Agreement Form

Agreement

This agreement, made the _____ day of _____ between _____ (name and address of Employer) [hereinafter called "the Employer"] of the one part and _____ (name and address of Contractor) hereinafter called "the Contractor" of the other part.

Whereas the Employer is desirous that the Contractor execute

_____ (name and identification number of Contract) (hereinafter called "the Works") and the Employer has accepted the Bid of the Contractor for the execution and completion of such Works and the remedying of any defects therein, at a cost of Rs. _____

NOW THIS AGREEMENT WITNESSTH as follows :

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the conditions of contract hereinafter referred to and they shall be deemed to form and be read and construed as part of this Agreement.
 2. 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 conformity in all aspects with the provisions of the contract.
 3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein 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.
 4. The following documents shall be deemed to form and be ready and construed as part of this Agreement viz.
 - i) Letter of Acceptance
 - ii) Notice to proceed with the works;
 - iii) Contractor/s Bid
 - iv) Condition of Contract : General and Special
 - v) Contract Data
 - vi) Additional condition
 - vii) Drawings
 - viii) Bill of Quantities and
 - ix) Any other documents listed in the Contract Data as forming part of the Contract. In witnessed where to the parties there to have caused this Agreement to be executed the day and year first before written.
- The Common Seal of _____ was hereunto affixed in the presence of :

Signed, Sealed and Delivered by the said _____

in the presence of :

Binding Signature of Employer _____

Binding Signature of Contractor _____

Signaturer of Tenderer

UNDERTAKING

I, the undersigned do hereby undertake that our firm M/s _____ agree to abide by this bid for a period _____ days for the date fixed for receiving the same and it shall be binding on us and may be accepted at any time before the expiration of that period.

(Signed by an Authorized Officer of the Firm)

Title of Officer

Name of Firm

DATE

SECTION 9
DRAWINGS

SECTION 10
DOCUMENTS TO BE FURNISHED BY BIDDER