

**Tender No: RailTel/Tender/OT/ER/HQ/2016-17/958
Dt. 27.10.2016**

TENDER DOCUMENT

FOR

**"Construction of Telecom Hub cum office for RailTel and
&
Railway at Karbhigahia side, Patna".**



**RAILTEL CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)
EASTERN REGION**

**16th^{Floor}, Chatterjee International Centre,
33A, Jawaharlal Nehru Road,
Kolkata – 700 071**

Cost of Tender Document: 1) Rs. 5,250/- (Rupees five thousand two hundred fifty only).
2) Rs. 5,750/- (Rupees five thousand Seven hundred fifty only) by postal.

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RailTel Corporation of India Ltd.
Chatterjee International Centre, 16th floor,
33A, Jawaharlal Nehru Road, Kolkata - 700071.
Ph. (033) 44041499, Fax: 033 - 44041490

TENDER NOTICE

Open Tender Notice No. RailTel/Tender/OT/ER/HQ/2016-17/958

Dated: 27.10.2016

RailTel Corporation of India Ltd. (RailTel) invites open tenders in sealed covers, from the reputed /established contractors with proven experience for the work of "Construction of Telecom Hub cum office for RailTel & Railway at Karbhigahia side, Patna". The details are as under: -

a)	Sale of Tender Documents	08.11.2016
b)	Closing of sale of Tender Documents	06.12.2016
c)	Submission of tender documents	07.12.2016 up to 15:00hrs.
d)	Opening of tender documents	07.12.2016 at 15.30hrs.
e)	Approx. cost	Rs.1,71,48,131.00 (Rupees One core seventy one lacks forty eight thousand one hundred thirty one only)
f)	Earnest Money (EMD)	Rs 2,35,750.00 (Rupees Two Lacks thirty five thousand seven hundred fifty only)
g)	Cost of Tender Document	Rs.5, 250/- (Rs.5, 750/-, if required by post).*
h)	Completion Period	10 (Ten) Months.
* These will be payable by Bank Draft in favor of RailTel Corporation of India Limited., Kolkata.		

Only such Tenderers will be qualified to bid who shall fulfill the Qualifying Criteria indicated at of the tender document.

The offer to be submitted in sealed cover super scribes the Tender number and the name of the work. It should also contain:

1. Duly filled and signed Tender Document including Offer Letter
2. Financial bid.
3. An Earnest Money document in the prescribed form.
4. Cost of Tender Document
5. Copy of PAN card
6. A clause wise compliance and statement of deviation as per pro-forma (Form No.6)

Other documents as per clause 11 of General Instructions to Tenderers. Tender Document incorporating changes of is available at RailTel's website: www.railtelindia.com. In case Tender Document may be down loaded from website, an amount of Rs. 5,250/- (Rupees five thousand two hundred fifty only) in the form of DD shall be paid at the time of submission of tender document.

The offer from those Tenderer who have already submitted their Letter of Acceptance, conveying their unconditional acceptance of RailTel's Standard Conditions of contract together with the Earnest Money Deposit, Tender cost only shall be considered valid. The financial bid shall be considered for the subject work from such Tenderers only, who fulfill these above requirements. The offer from Tenderers who do not fulfill the above requirements shall be summarily reject.

(ARUN MICHAEL)
 General Manager/O & M
 Eastern Region, Kolkata.

OFFER LETTER

**The Executive Director,
Eastern Region,
RailTel Corporation of India Ltd.,
16th. Floor, Chatterjee International Centre,
33A, Jawaharlal Nehru Road,
Kolkata – 700 071.**

Sub: Tender for "Construction of Telecom Hub cum office for RailTel & Railway at Karbhigahia side at Patna".

Estimated Cost: Rs. 1, 71, 48,131.00 (Rupees one core seventy one lack forty eight thousand one hundred thirty one only).

Dear Sir,

I/We hereby tender for the execution of RailTel Corporation of India Limited (RAILTEL) for the work specified in the underwritten memorandum within the time specified in such memorandum at the rates specified therein, and in accordance in all respects with the specifications, design, drawings and instructions in writing referred to Clauses of the conditions of Contract and with such materials as are provided for, by and in all respects in accordance with terms and conditions stipulated herein.

MEMORANDUM

- a) **Description of Work:** "Construction of Telecom Hub cum office for RailTel & Railway at Karbhigahia side, Patna".
- b) Earnest Money: Rs. 2, 35,750/- (Rupees two lacks thirty-five thousand seven hundred fifty only).
- c) Performance Guarantee: 5% of the Contract Amount. Upon acceptance of tender, the successful tenderer within the time specified in the Letter of Acceptance shall deposit Performance Guarantee as per Clause 17.1 of General Instructions to Tenderers. The PBG shall be released as per Clause 17.4.
- d) **Time Allowed for the work: Time is the essence of the contract. The time allowed for Completion of Work Completion of Work 10 (Ten) months including Sundays and Holidays, from the date of issue of Letter of Acceptance/Work Order.**

Should this tender be accepted, in whole or in part, I/We hereby agree:

- (i) To abide and fulfill all the terms and provisions of the said conditions annexed hereto and all the terms and provisions contained in notice inviting tenders so far as applicable, and/or in default thereto, to forfeit and pay to

the employer, the sum of money mentioned in the said conditions. A sum of Rs. 2, 35,750/- is hereby forwarded in the form of Bank Demand Draft No..... dt. issued by..... as Earnest Money. If I/We fail to commence the work specified in the above memorandum, I/We agree that the Employer shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely otherwise the said earnest money be retained by him towards Security Deposit;

- (ii) To execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, at the rates quoted in the tender documents for respective items of work.

Dated, the____day of_____2015.

#Signature_____in the capacity of_____duly
authorized to sign tenders for and on behalf of_____.
(IN BLOCKLETTERS)

Witness _____
Address _____

Occupation _____

Signature of the Contractor
Signature of Witness to Contractor's Signature

Certified that instructions to tenderers have been complied with / adhered to and each page of the tender offer has been initialed.

Signature, Name & Designation of Authorized Person
Signing the tender on behalf of the tenderer.

APPENDIX

- | | | |
|-----|--|--|
| 1.0 | Signing the Agreement and Commencement of Work | : Within 15 days of issue of Letter of Acceptance Work Order |
| 2.0 | Period of Completion | : 10 (Ten) months from the date of issue of Letter of Acceptance/Work Order or Signing of Agreement. |
| 3.0 | Security Deposit | : As per clause no.16 of the General instructions to tenderers. |
| 4.0 | Refund of Security Deposit | : As per clause no. 16.2 of the General Instructions to the tenderers |
| 5.0 | Defect Liability Period | : ONE Year from the date of issue of Provisional Acceptance Certificate |
| 6.0 | Earnest Money Deposit | : Rs. 2, 35,750/- (Rupees two lacks thirty-five Thousand seven hundred fifty only). |

- 7.0 Tender to be submitted at:

RailTel Corporation of India Limited,
3rd. Floor, Chatterjee International Centre,
33A Jawaharlal Nehru Road,
Kolkata 700 071.

8.0 Site Address:

**Telecom Hub cum office
for RailTel/Eastern Region /Patna & Railways, Patna
(Near RRI Bldg.) Karbhigahia side, Patna.**

RAILTEL CORPORATION OF INDIA LIMITED

ACCEPTANCE LETTER

**The Executive Director,
Eastern Region,
RailTel Corporation of India Ltd.(16 th. Floor),
33A Jawaharlal Nehru Road,
Kolkata – 700 071.**

Sir,

Sub: Tender for" Construction of Telecom Hub cum office for RailTel/ER & Railway at Karbhigahia side at Patna".

We hereby unconditionally accept the tender terms and conditions in its entirety for subject tender.

We specifically confirm that we shall be able to complete the work in its entirety within the stipulated time indicated and hereby convey our acceptance of the Liquidated Damage clause indicated in the tender document.

Date: _____

SIGNATURE OF TENDERER
WITH STAMP

SECTION – I

GENERAL INSTRUCTIONS TO TENDERERS

1. SUBMISSION OF TENDERS:

- The tenders shall be submitted as per the format of RAILTEL enclosed herewith before or on **07.12.2016** up to 15:00 hrs in the Office of "Executive Director, RailTel Corporation of India Limited, Eastern Region, 3rd. Floor, Chatterjee International Centre, 33A, Jawaharlal Nehru Road, Kolkata – 700071"
- The tender shall be addressed to: The Executive Director/Eastern Region inviting tenders as indicated in the tender notice.
- Tenders submitted by post shall be sent as "REGISTERED POST ACKNOWLEDGEMENT DUE" and shall be posted with due allowance for any postal delay. The tenders received after the due date and time of opening is liable to be rejected. Telegraphic offers and offers received by telex/e-mail shall not be considered.
- Tenders shall be opened at the date and time as specified in the tender notice in the presence of such of those tenderers or their authorized representatives who may be present at the Office of "The Executive Director, RailTel Corporation of India Ltd., Eastern Region, 3rd Floor, Chatterjee International Centre, 33A Jawaharlal Nehru Road, Kolkata – 700071"
- The tenderers shall closely peruse all the clauses, specifications and drawings indicated in the Tender Document before quoting. Should the tenderer have any doubt about the meaning of any portion of the Tender specifications or find discrepancies / omission in the Drawings or the tender documents issued are incomplete or shall require clarification on any of the technical aspect, Scope of Work etc., he shall at once contact the authority inviting the tender for clarification before the submission of the tender
- Before tendering, the tenderers are advised to inspect the site of work and the environments and be acquainted with the actual working and other prevalent conditions, rules, regulations, stipulations etc. of the management of the building committee, facilities available, position of material and labour. No claim will be entertained later on grounds of lack of knowledge on this aspect.
- Tenderer must fill up the Form of Tender and furnish all the required information as per the instructions given in various sections of the specifications. Each and every page of the tender specification must be SIGNED, STAMPED & SUBMITTED ALONGWITH THE OFFER by the tenderer in token of complete acceptance thereof. The information furnished shall be complete itself.
- The tenderer shall quote the rates in English Language and International numerals. These rates shall be entered in figures as well as in words. In case of difference in rates between words and figures, Rates mentioned in words shall be treated as valid rate.

9. All entries in the tender shall be written in ink. Erasers and over writing are not permitted and may render such tenders liable to rejection. All cancellations and insertions shall be duly attested by the tenderer.

10. ELIGIBILITY CRITERIA:

The tenderers should fulfill the eligibility criteria mentioned below:

Tenderer should have completed at least one similar single work i.e., Any Civil Engineering works for a minimum value of 35% of the advertised tender value of the work in last three financial years (i.e., Current year and three previous financial years).

- i) Similar nature of works physically completed within the qualifying period i.e., the last three financial years and current financial year will only be considered in evaluating the eligibility criteria.
- ii) The total value of similar nature of works completed during the qualifying period and not the payments received within qualifying period alone will be considered.
- iii) Total Contract amount received by the tenderer during the last three financial years and in the current financial year should be a minimum of 150% of the advertised tender value. Tender Committee will satisfy themselves about the authenticity of the certificates produced by the tenderer to this effect which may be an attested certificate from the employer/client. Audited balance sheet duly certified by the Chartered Accountant etc.
- iv) Tenderer must enclose relevant certificate in support of above eligibility criteria in absence of which their tender may be treated as incomplete and be summarily rejected.

11. DATA TO BE ENCLOSED:

Full information shall be given by the tenderer in respect of the following. Non-submission of this information may lead to rejection of the offer.

11.1 Analysis of unit rate quoted as per Performa enclosed herewith.

11.2 Declaration sheet as per Performa enclosed herewith;

11.3 Clause compliance and statement of deviation (as per Form No.6);

11.4 Photocopy of PAN card;

11.5 The documentary evidence of execution of similar work shall be enclosed with offer.

11.6 In additions to the above, the particulars required elsewhere in tender documents.

NOTE: In terms of clauses 11.1 to 11.3 above, all the data required to be enclosed with the tender need to be furnished neatly written, signed and stamped in the given formats only (in the form of separate sheets) failing which the tender

may be considered as incomplete and is liable for rejection. Documentary proofs wherever necessary also need to be enclosed.

12. EARNEST MONEY DEPOSIT:

- 12.1 The tenderer shall furnish a sum of Rs. 2, 35,750/- (Rupees two lacs thirty-five thousand seven hundred fifty only) as earnest money in favour of RailTel Corporation of India Limited in the form of Bank Demand Draft to be issued by SBI/any nationalized bank or schedule bank.
- 12.2 The tenderer shall hold the offer open till such date as specified in Clause 14 of this chapter. It being understood that the tender documents have submitting his tender he will not resale from his offer or modify the terms and conditions thereof in a manner not acceptable to Railtel. If the tenderer fails to observe or comply with the foregoing stipulation, the aforesaid amount deposited as Earnest Money shall be liable to be forfeited by the RailTel.
- 12.3 The Earnest Money receipt shall be incorporated in the original copy of the tender document. The Earnest Money should be furnished in any of the following forms:
 - (a) Deposit Receipt, Pay Orders or Demand Drafts of the State Bank of India or any of the Nationalized Bank.
 - (b) Deposit receipt/ Pay Orders or Demand Draft of the Scheduled Banks (other than the State Bank of India and the Nationalized Banks) as defined in RBI Act 1934.
- 12.4 Deposit Receipts, Pay Orders or Demand Drafts should be drawn in favour of the "RailTel Corporation of India Limited" payable at Kolkata and endorsed "Account Payee". These instruments should be valid at least for the period covering thirty days beyond the validity of the offer.
- 12.5 Earnest money may be forfeited:
 - (a) If a tenderer withdraws its tender during the period of tenders validity specified in clause 14.
 - (b) In the case of successful tenderer, if the tenderer fails to:
 - (i) Sign the contract in accordance with clause 15.
and/or
 - (ii) To furnish performance guarantee in accordance with clause 17.
- 12.6 The earnest money of unsuccessful tenderer will be returned within reasonable time to the unsuccessful tenderer but RailTel shall not be responsible for any loss or depreciation that may happen to the security for the due performance of the above stipulation to keep offer open for the period specified in the tender documents or to the Earnest Money while in their possession nor be liable to pay any interest thereon.

- 12.7 If the tender is accepted, the amount of Earnest Money will be held as part of security deposit for due and faithful fulfillment of contract.

13. AUTHORISATION AND ATTESTATION:

Tenders shall be signed by the person duly authorized / empowered to do so. Certified copies of such authority and relevant documents shall be submitted along with the tenders.

14. VALIDITY OF OFFER:

THE OFFER SHALL BE KEPT OPEN FOR ACCEPTANCE FOR A MINIMUM PERIOD OF 90 DAYS FROM THE DATE OF OPENING OF TENDERS. In case RAILTEL calls for negotiations, such negotiations shall not amount to cancellation or withdrawal of the Original offer which shall be binding on the tenderers.

15. EXECUTION OF CONTRACT:

The successful tenderers responsibility under this contract commences from the date of issue of the Letter of Acceptance / Work Order by RAILTEL. The successful tenderer shall be required to execute an agreement in the prescribed proforma enclosed herewith with the RAILTEL within 15 days after the acceptance of his tender and in any case before submitting the first bill for payment. The expenses for completion and making required number of copies and compilation of contract documents, duly bound/titled and stamping/registration of the agreement with prescribed authority, if necessary, shall be borne by the Contractor.

16. SECURITY DEPOSIT:

- 16.1 The Earnest Money deposited by the Contractor with his tender will be retained by the RailTel as part of security deposit for the due and faithful fulfillment of the contract by the contractor. The balance to cover up the security deposit, will be recovered (@ 10%) by percentage deduction from the contractor's "on account" bills. Provided also that in case of defaulting contractor the RailTel may retain any amount due for payment to the Contractor on the pending "on account bills" so that the amounts so retained may not exceed 10% of the total value of the contract.

- 16.2 Unless otherwise specified in the special conditions, if any, the rates for Deposit / rate of recovery / mode of recovery shall be as under:

- (a) Security Deposit for each work should be 5% of the contract value.
- (b) The rate of recovery should be at the rate of 10% of the bill amount till the full security deposit is recovered.
- (c) Security Deposits will be recovered only from the running bills of the contract and no other mode of collecting SD such as SD in the form of instruments like BG shall be accepted towards Security Deposit.

Security Deposit shall be returned to the contractor after the complete physical completion of the work as certified by the competent authority. The competent authority shall normally be the authority that is competent to sign

the contract.

16.3 RAILTEL reserves the right of forfeiture of Security Deposit in addition to other claims and penalties in the event of the Contractor's failure to fulfill any of the contractual obligations or in the event of termination of contract as per terms and conditions of the contract. RAILTEL reserves the right to set off the Security Deposit, against any claims of any other contracts with RAILTEL.

16.4 No interest shall be payable by RAILTEL on Earnest Money Deposit, Security Deposit or on any moneys due to the Contractor.

17. PERFORMANCE GUARANTEE

17.1 On receipt of the Letter of Acceptance of Tender from the RailTel the successful Tenderer shall within a period of 15 days' deposit with the RailTel an amount equal to 5% of the value of contract towards payment of performance guarantee for due fulfillment of the contract. The performance guarantee shall be in the form of a irrevocable Bank Guarantee from any Nationalized/Scheduled Bank and should be valid for 4 (four) months beyond the warranty date.

¹
17.2 If the value of the work done at any time exceeds the accepted agreement value, the Performance Guarantee shall be correspondingly enhanced and the extra Performance Guarantee shall be immediately deposited by the Contractor or recovered from payments due to him.

17.3 Failure to deposit the Performance Guarantee within the stipulated time, may lead to forfeiture of Earnest Money Deposit and cancellation of the award of work.

17.4 RETURN OF PERFORMANCE GUARANTEE: If the Contractor fully performs and completes the work in all respects to the entire satisfaction of RAILTEL and presents an absolute "No Claim Certificate" in the prescribed form from RAILTEL and returns properties belonging to RAILTEL taken, borrowed or hired by him for carrying out the said works, and has completed ONE YEAR from the date of Completion of work as certified by the authorized representative of RAILTEL, the total amount of Performance Guarantee will be released to the Contractor after deducting all costs, expenses and other amounts that are to be paid to RAILTEL under this or other contracts entered into with the Contractor.

18. REJECTION OF TENDER AND OTHER CONDITIONS:

18.1 The acceptance of Tender will rest with RAILTEL which does not bind itself to accept the lowest tender or any tender and reserves to itself full rights for the following without assigning any reason what so ever.

- (a) To reject any or all the tenders.
- (b) To split up the work amongst two or more tenderers.
- (c) To award the work in part.
- (a) In either of the contingencies stated in (b) and (c) above to modify the time for completion suitably.

- 18.2 Conditional and un-witnessed tenders, tenders containing absurd or unworkable rates and amounts, tenders which are incomplete or otherwise considered defective and tenders not in accordance with the tender conditions, specifications etc. are liable to be rejected.
- 18.3 If the tenderer expires after the submission of his tender or after the acceptance of his tender, RAILTEL may at its discretion, cancel such tender. If a partner of a firm expires after the submission of the tender or after the acceptance of the tender, RAILTEL may cancel such tender at its discretion unless the firm retains its character.
- 18.4 RAILTEL will not be bound by any Power of Attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. RAILTEL may, however, recognize such Power of Attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Contractor concerned.
- 18.5 If the tenderer deliberately gives wrong information in his tender, RAILTEL reserves the right to reject such tender at any stage or to cancel the contract, if awarded and forfeit the Earnest Money / Security Deposit / any other moneys due.
- 18.6 Canvassing in any form in connection with the tender is strictly prohibited and the tenders submitted by the Contractor who resorts to canvassing are liable to be rejected.
- 18.7 Should a tenderer or Contractor or in the case of a firm or Company of Contractors / one or more of its Partners / Share holders / Directors have a relation or relations employed in RAILTEL, the authority inviting the tender shall be informed to the fact along with the offer, failing this RAILTEL may at its sole discretion reject the tender or cancel the contract and forfeit the Earnest Money /Performance Guarantee Bond/ Security Deposit.
- 18.8 The successful tender shall not sub-contract the part or complete work detailed in the tender specifications without written permission of Architect / RAILTEL. The tenderer is solely responsible to RAILTEL for the work awarded to him.
- 18.9 NO DEVIATIONS TO THE TENDER CONDITIONS SHALL BE ACCEPTED WHATSOEVER.
- 18.10 The proposed Work shall be planned in such a way to avoid inconvenience to the normal working of other Offices working in the Building. The major work shall be executed after Office hours and on Holidays. During Office hours, it is planned to execute lighter jobs.
- 18.11 All electrical work shall be carried out as per ISI standards. On Completion of all electrical works, the electrical wiring work shall be tested as specified in IS code and report in this respect will be submitted by the Contractor to authorized representative of RAILTEL.
- 18.12 All completion drawings/"as built" Drawings shall be submitted by the Contractor on completion of works along with the Final Bill.

SECTION – II

GENERAL TERMS AND CONDITIONS

- 1.1 The following terms and expressions shall have the meaning hereby assigned to them except where the context other wise requires.
- 1.2 RAILTEL shall mean RAILTEL CORPORATION OF INDIA LIMITED, a Company with its Registered Office at 6th Floor, III rd Block, Delhi Technology Park, Shastri Park, Delhi – 110053 or its authorized Officers or other Employees authorized to deal with any matters with which these persons are concerned, on its behalf.
- 1.3 'EXECUTIVE DIRECTOR, EASTERN REGION' shall mean the Officer in Administrative In-charge of the contracting unit of RAILTEL.
- 1.4 'SITE' shall means the place or places at which the plants / equipment's are to be erected and services are to be performed as per the specifications of this tender.
- 1.5 Deleted.
- 1.6 'CONTRACTOR' shall mean the individual, firm or company who enters into contract with RAILTEL and shall include their executors, administrators, successors and permitted assigns.
- 1.7 'CONTRACT' or 'CONTRACT DOCUMENT' shall mean and include the agreement, the work order, the accepted appendices of rates, Schedules of Quantities, if any, General Conditions of Contract, Special Conditions of contract, instructions to Tenderers, the drawings, the technical specifications, the special specifications, if any, the tender documents and the Letter of Acceptance / Work Order issued by RAILTEL. Any conditions or terms stipulated by the tenderer in the tender documents or subsequent letters shall not form part of the Contract unless specifically accepted in writing by RAILTEL in the Letter of Acceptance / Work Order and incorporated in the Agreement.
- 1.8 'GENERAL CONDITIONS OF CONTRACT' shall mean the 'Instructions to Tenderers' and 'General Conditions of Contract' pertaining to the work detailed.
- 1.9 'TENDER SPECIFICATIONS' shall mean the Special Conditions, Technical Specifications, appendices, Site information and drawings pertaining to the work for which the tenderers are required to submit their offer.
- 1.10 'TENDER DOCUMENTS' shall mean the General Conditions of Contract (19.7) and Tender Specifications (19.8).
- 1.11 'LETTER OF ACCEPTANCE / WORK ORDER' shall mean the intimation by a letter / telegram / telex / fax /e-mail to the tenderer that the tender has been accepted in accordance with provisions contained in the letter. The

responsibility of the Contractor commences from the date of issue of this letter and all the terms and conditions of contract are applicable from this date.

- 1.12 'COMPLETION TIME' shall mean the period by date specified in the Tender document / Letter of Acceptance / Work Order. The time allowed for completion of the work will be 10 (Ten) months from the date of issue of Letter of Acceptance / Work Order including Sundays & holidays.
- 1.13 'PLANT' shall mean and connote the entire assembly of the plant and equipment covered by the Contract.
- 1.14 'EQUIPMENT' shall mean all equipment, machineries, materials, structural, electrical and other components of the plant covered by the Contract.
- 1.15 'TEST' shall mean and include such test or tests to be carried out by the Contractor as are prescribed in the Contract or considered necessary by RAILTEL in order to ascertain the Quality, Workmanship, Performance and Efficiency of the contracted work or part thereof.
- 1.16 'APPROVED', 'DIRECTED' or 'INSTRUCTED' shall mean approved, directed or instructed by RAILTEL.
- 1.17 'WORK' or 'CONTRACT WORK' shall mean and include supply of all categories of labour, specified consumables, tools and tackles required for complete and satisfactory site transportation, handling, stacking, and storing.
- 1.18 'SINGULAR' and 'PLURAL' ETC. Words carrying singular number shall also include plural and vice versa where the context so requires. Words importing masculine gender shall be taken to include the feminine gender and words importing persons shall include any Company or Association or Body of Individuals, whether incorporated or not.
- 1.19 'HEADINGS' the heading in these General Conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or the contract.
MONTH' shall mean any consecutive period of 30 days.
- 1.20 WRITING' shall include any manuscript, type written or printed statement under the signature or seal as the case maybe.
- 1.21 "The authorized representative of RAILTEL" shall mean the representative duly authorized by RailTel and can be the architect, or an official appointed by RailTel.

2.0 LAW GOVERNING THE CONTRACT AND COURT JURISDICTION:

The contract shall be governed by the Law for the time being in force in the Republic of India. The Civil Court at Delhi/New Delhi having ordinary Original Civil Jurisdiction shall alone have exclusive jurisdiction in regard to all claims in respect of this Contract.

3.0 ISSUE OF NOTICE:

The Contractor shall furnish to the RAILTEL, the Name, Designation and Address of his authorized agent and all complaints, notices, communication and references shall be deemed to have been duly given to the Contractor, if delivered to the Contractor or his authorized agent or left at or posted to the address either of the Contractor or his authorized agent and shall be deemed to have been so given in the case of posting on the day on which they would have reached such address in the ordinary course of post or at which they were so delivered or left.

4.0 USE OF LAND:

No land belonging to RAILTEL or its customers under temporary possession of RAILTEL shall be occupied by the Contractor without the written permission of RAILTEL. Whenever such land is occupied by the Contractor for execution of works on permission of RAILTEL, the same shall be vacated by the Contractor within 2 days of instructions from RAILTEL and no request for extension shall be entertained by RAILTEL.

5.0 COMMENCEMENT AND COMPLETION OF WORK:

- 5.1 The Contractor shall commence the work within the time indicated in the Letter of Acceptance / Work Order and shall proceed with the same with due expedition without delay.
- 5.2 If the successful tenderer fails to commence the work within the stipulated time, RAILTEL, at its sole discretion, will have the right to cancel the contract. His Earnest Money and or Performance Guarantee bond and or Security Deposit will stand forfeited without any further reference to him without prejudice to any and all of RailTel's other rights and remedies in this regard.
- 5.3 All the works shall be carried out under the direction and to the satisfaction of authorized representative of RAILTEL.
- 5.4 The transported equipment erected/constructed plant or work performed under the Contract, as the case may be, shall be taken over when it has been completed in all respects and / or satisfactorily put into operation at site.
- 5.5 On the completion of work, authorized representative of RAILTEL shall issue a Provisional Acceptance Certificate for successful completion of work to his satisfaction jointly with the contractor.
- 5.6 The period of warranty shall start from the date of issue of such Provisional Acceptance Certificate, as above, for a period of one year.
- 5.7 After completion of **warranty period**, a Final Acceptance Certificate shall be issued by the authorized representative of RAILTEL. The final acceptance shall take effect from the date of expiry of warranty period.

6.0. MEASUREMENT OF WORK AND MODE OF PAYMENT:

- 6.1 All payments due to the Contractor shall be made by RTGS/NEFT.
- 6.2 Payments for the works shall be made in accordance with approved designs & drawings and measured in relevant units except where provided or otherwise. The measurements will be made generally in accordance with standard engineering practices. The abstract of quantities arrived shall be entered in the Measurement Book and signed by the Contractor & the authorized representative of RAILTEL.
- 6.3 90% (Ninety percent) of the On-account/Progress payment for each item of Schedule-"A" to "E" of work shall be made after part successful completion, joint measurement and testing to the satisfaction of Engineer.
- 6.4 Payment of 5% (Five percent) of the value of works shall be made after total completion of the work and the issue of Provisional Acceptance Certificate and supply of Documentation as per Para 18.12 of General Instructions to Tenderers (Section-I).
- 6.5 Final payment of 5% (Five percent) of the value of works shall be made after satisfactory completion/operation & maintenance of the work under the supervision of the contractor for a period of one year from the date of issue of Final Acceptance Certificate.
- 6.6 On the basis of Provisional Acceptance Certificate from the RailTel for all the works at all the locations covered in this contract and reconciliation of materials issued, the final bill for the balance payment for each item of work shall be submitted by the Contractor along with a clear 'No Claim Certificate'. The Provisional Acceptance Certificate shall be issued by the RAILTEL only when he has accepted the work wholly after conducting the acceptance tests.
- 6.7 Release of Security Deposit shall be made after issue of the Provisional Acceptance Certificate and completion of warranty period.
- 6.8 All recoveries due from the Contractor for the month / period shall be affected in full from corresponding running bills unless specific approval from competent authority is obtained to the contrary.
- 6.9 Measurement shall be restricted to that quantity for which it is required to ascertain the financial liability of RAILTEL under this contract.
- 6.10 The Contractor shall bear the expenditure involved, if any, in making the measurements and testing of materials to be used / used in the work. The Contractor shall, without extra cost to RAILTEL, provide all the assistance with appliances and other things necessary for measurement.
- 6.11 If, at any time due to any reason whatsoever, it becomes necessary to re-measure the work done, in full or in part, the expenses towards such re-measurement shall be born by the Contractor only.

- 6.12 Passing of bills covered by such measurements does not amount to acceptance of RAILTEL of the completion of the work measured. Any left out work has to be completed by the contractor, as directed.
- 6.13 All measurement, method of measurement, meaning an intent of specifications and interpretation of Special Conditions of Contract, given and made by the authorized representative of RailTel shall be final and binding.
- 6.14 Subject to any deductions or recovery which the Railtel may be entitled to make under contract, the Contractor will be entitled to be paid from time to time by way of 'on account payment' for supply of goods and 'progress payment' for works as in the opinion of the Engineer he has executed in terms of Contract.
- 6.15 On expiry of the warranty period (i.e. ONE year) and issue of the certificate of final acceptance of the entire installations, the Performance Guarantee will be released to the Contractor. If at that time it is found that there are any dues from the contractor, the contractor shall be asked to make payment of the amount to RailTel. In the event the contractor fails to do so, the Performance Guarantee shall be encased and the amount refunded after adjustment of any dues payable to RailTel by the contractor.

7.0 RIGHTS OFRAILTEL:

RAILTEL reserves to itself the following rights in respect of this contract without entitling the Contractor to any compensation.

- 7.1 To get the work done through another agency in the event of poor progress or the Contractor's inability to progress the work for Completion as stipulated in the contract, poor quality of work, persistent disregard of instructions of Architect / RAILTEL, assignment, transfer, subletting of the contracted work without written permission of RAILTEL, non-fulfillment of any contractual obligations etc. and to claim / recover compensation for such losses from the Contractor including RAILTEL's supervision charges and overheads from Security Deposit/other dues.
- 7.2 To withdraw any portion of work and / or to restrict / alter quantum of work as indicated in the contract during the progress of work and get it done through another agency and / or by the departmental labour to suit RAILTEL's requirements or in case RAILTEL decides to advance the compensation due to other emergent reasons.
- 7.3 To terminate the contract after due notice and forfeit the Performance Guarantee and or Security Deposit and recover the loss sustained in getting the balance work done through other agencies in addition to liquidated damages in the event of:
 - (a) Contractor's continued poor progress.
 - (b) Withdrawal from or abandonment of the work before completion of the work.
 - (c) Corrupt act of the Contractor.
 - (d) Insolvency of the Contractor.
 - (e) Persistent disregard of the instructions of Architect /RAILTEL.

- (f) Assignment, transfer, subletting of the contract work without written permission.
- (g) Non-fulfillment of any contractual obligations.
- 7.4 To recover any moneys due from the Contractor from out of any moneys due to the Contractor under this or any other Contract or from the Performance Guarantee and or Security Deposit.
- 7.5 To determine the Contract or to restrict the quantum of work and pay for the portion of work done as per the satisfaction of RAILTEL.
- 7.6 To effect recoveries from any amounts due to the Contractor under this or any other contract or in any other form the moneys which RAILTEL is forced to pay to anybody due to Contractor's failure to fulfill any of his obligations.
- 7.7 To restrict or increase the quantity and nature of work to suit site requirements, since the tender specifications are based on preliminary documents and quantities furnished therein are indicative and approximate and the rates quoted shall not be subject to revision in any manner whatsoever.
- 7.8 To deploy RailTel's skilled and semiskilled workmen in case of emergency / poor progress / deficiency in skill on the part of the employees of the Contractor and to recover the expenditure on account of the same from the moneys due to the Contractor.
- 7.9 While every endeavor will be made by RAILTEL to this end, RAILTEL cannot guarantee uninterrupted work due to conditions beyond its control. The Contractor will not be entitled to any compensation / extra payment on this account.
- 7.10 RailTel reserves the right to award the work to one contractor or divide the work between two or more contractors. In this case the decision of RailTel shall be final and binding on the contractor.
- 7.10 In the event of any dispute of technical nature, the decision of RAILTEL shall be final and binding to the Contractor.

8.0 RESPONSIBILITIES OF CONTRACTOR IN RESPECT OF LOCAL TAXING RULES, LOCAL LAWS, EMPLOYMENT OF WORKERS, ETC.:

The following are the responsibilities of the Contractor in respect of observance of local laws, employment of personnel, payment of taxes etc.:

- 8.1 The tenderer must be registered with the West Bengal state for the payment of Works Contract Tax OR tenderer must register for the same before the award of contract.
- 8.2 As far as possible, unskilled workers shall be engaged from the local areas in which the work is being executed.
- 8.3 The Contractor at all times during the continuance of this contract, shall in all his dealings with the local labour for the time being employed on or in

connection with the work, has due regard to all local festivals, religious and other customs.

- 8.4 The Contractor shall comply with all State and Central Laws, Statutory Rules, Regulations etc., such as The Payment of Wages Act, The Minimum Wages Act, The Workmen's Compensation Act, The Employer's Liability Act, The Industrial Disputes Act, The Employee's Provident Fund Act, Employee's State Insurance Scheme, The Contract Labour (Regulations and Abolitions Act, 1970) and other Acts, Rules and Regulations for labour as may be enacted by the Government during the tenure of the Contract and having force or jurisdiction at site. The Contractor shall give to the local Governing Body, Police and other concerned authorities all such notice as may be required under law.
- 8.5 The Contractor will obtain independent license under the Contract Labour (Regulations and Abolition Act, 1970) from the concerned authorities based on the certificate (Form -V) issued by the principal employer /customer.
- 8.6 The Contractor shall pay all taxes, fees, license charges, deposits, duties, tolls, royalty, commissions or other charges which may be livable on account of any of his operations connected with this contract. In case, RAILTEL is forced to make any such payment, RAILTEL shall recover the same from the Contractor either from moneys due to him or otherwise as deemed fit.
- 8.7 The Contractor shall be responsible for the provision of health and sanitary arrangements more particularly described in the Contract Labour (Regulations and Abolition Act, 1970) and safety precautions as may be required for safe and satisfactory execution of the contract.
- 8.8 The Contractor shall be responsible for proper accommodation including adequate medical facilities for the personnel employed by him.
- 8.9 The Contractor shall be responsible for the proper behavior and observance of all regulations by the staff employed by him.
- 8.10 The Contractor shall ensure that no damage is caused to any person / property of other parties working at site. If any such damage is caused, it shall be the responsibility of the Contractor to make good the losses and compensate them.
- 8.11 All the properties/equipment/components of RAILTEL loaned with or without deposit, to the Contractor shall remain the properties of RAILTEL. The Contractor shall use such properties for the purpose of execution of this contract. All such properties/ equipment / component shall be taken to be in good condition unless notified to the contrary by the Contractor within 48 hours. The Contractor shall return them in good condition as and when required by RAILTEL. In case of non-return, loss, damage, repairs etc., the cost thereof, as may be fixed by the Engineer, will be recovered from the Contractor.
- 8.12 It shall not be obligatory on the part of RAILTEL to supply any tools and tackles or materials other than those specifically agreed to be given by RAILTEL.

- 8.13 The Contractor shall fully indemnify and keep indemnified RAILTEL against all claims of whatever nature arising during the course of execution of this contract.
- 8.14 In case the Contractor is required to undertake any work outside the scope of this contract, the amount payable shall be as may be mutually agreed upon.
- 8.15 Any delay in completion of works or non-achievement of periodical targets, due to reasons attributable to the Contractor, will have to be compensated by the Contractor either by increased manpower and resources or by working extra hours or more than one shift at no extra cost to RAILTEL.
- 8.16 The Contractor will be directly responsible for payment of wages to his workmen. A pay-roll sheet giving details of all payments made to the workmen duly signed by the Contractor's representative should be furnished to RAILTEL, if called for.
- 8.17 In case of any class of work for which there is no specification laid down in the contract, such work shall be carried out in accordance with the instructions and requirements of the Engineer.
- 8.18 No levy, payment or charges made or imposed shall be impeached by reason of any clerical error or by reason of any mistake in the amount levied, demanded or charged.
- 8.19 No idle labour charges will be admissible in the event of any stoppage of work resulting in the Contractor's workmen being rendered idle due to any reason at any time. Similarly, no additional payment will be made for doing any work at night. Work at night shall be done by the contractor at the sole risk, responsibility and cost.
- 8.20 The Contractor shall take all reasonable care to protect the materials and the work till such time it has been taken over by RAILTEL.
- 8.21 Contractor shall not stop work or abandon the site for whatsoever reason or dispute, excepting for *force majeure* conditions. All problems / disputes shall be separately discussed and settled without affecting the progress of work. Stoppage or abandonment of work other than under *force majeure* conditions shall be treated as breach of work of contract and dealt with accordingly.
- 8.22 The Contractor shall keep the area of work clean and shall remove the debris etc. outside of RailTel's premises, while executing day-to-day work. Upon completion of work, the Contractor shall remove from the vicinity of work, all scrap, packing materials, rubbish, unused and other materials and deposit them in places specified by the Engineer. The Contractor will also demolish all the hutments, sheds, offices, etc., constructed and used by him and shall clean the debris. In the event of his failure to do so, the same will be arranged to be done by the RAILTEL and the expenses recovered from the Contractor.

- 8.23 The Contractor shall execute the work in the most substantial and workmen like manner in the stipulated time. Accuracy of work and timely execution shall be the essence of this contract. The Contractor shall be responsible to ensure that the quality, assembly and workmanship conform to the dimensions and clearance given in the drawings and/or as per the instructions of the Engineer.
- 8.24 The Contractor shall furnish fortnightly labour deployment report indicating the classification and number of workmen engaged, date wise and category wise. Besides, the Contractor shall also furnish progress reports on work at regular intervals as required by the Engineer.

9.0 RESPONSIBILITIES OF CONTRACTOR IN RESPECT OF SAFETY OF MEN, EQUIPMENT, MATERIAL AND ENVIRONMENT:

- 9.1 All safety rules and codes applied by RAILTEL at site shall be observed by the Contractor and his workmen without exception. The Contractor shall be responsible for the safety of the equipment / material and work to be performed by him.

Contractor shall also take such additional precautions as may be indicated from time to time by the Engineer, with a view to prevent pilferage, accidents, fire hazards etc. Suitable number of Clerical Staff, watch and ward, Store keepers to take care of equipment, material, construction tools and tackles shall be posted at site by the Contractor till the completion of work under this contract. The Contractor shall arrange for such safety devices as are necessary for this type of work and carry out the requisite site tests of handling equipment, lifting tools, tackles etc. as per usual standards and practices.

- 9.2 The Contractor shall provide to its work force and ensure the use of the following personal protective equipment as found necessary and as directed by the authorized RAILTEL officials.
- (a) Safety Helmets conforming to IS -2925.
 - (b) Safety Belts conforming to IS -3521.
 - (c) Safety Shoes conforming to IS -1989.
 - (b) Eye & Face Protection devices conforming to IS - 8520 & IS -8940.
 - (c) Hand & Body Protection devices conforming to IS - 2573, IS - 6994, IS - 8807 & IS -8519.
- 9.3 All tools, tackles, lifting appliances, material handling equipment, scaffolds, cradles, safety nets, ladders, equipment etc. used by the Contractor shall be of safe design and construction. These shall be tested and certificate of fitness obtained before putting them to use and from time to time as instructed by authorized RAILTEL official who shall have the right to ban the use of anytime.
- 9.4 All electrical equipment, connections and wiring for construction power, its distribution and use shall conform to the requirements of Indian Electricity Act and Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the Contractor to carry out all types of electrical works. All electrical appliances including portable electric tools used

by Contractor shall have safe plugging system to source of Power and be appropriately earthed.

- 9.5 Where it becomes necessary to provide and / or store petroleum products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the Contractor shall be responsible for carrying out such provision and / or storage in accordance with the rules and regulations laid down in the relevant Government Acts, such as Petroleum Act, Explosive Act, Petroleum and Carbide of Calcium Manual of the Chief Controller of Explosives, Government of India etc. Prior approval of the authorized RAILTEL official at the site shall also be taken by the Contractor in all such matters.
- 9.6 The Contractor shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working, when natural daylight may not be adequate for clear visibility.
- 9.7 In case of a fatal or disabling injury/accident to any person at construction sites due to lapses by the Contractor, the victim and/or his/her dependants shall be compensated by the Contractor as per statutory requirements. However, if considered necessary, RAILTEL shall have the right to impose appropriate financial penalty on the Contractor and recover the same from payments due to the Contractor for suitably compensating the victim and/or his/her dependents. Before imposing any such penalty, appropriate enquiry shall be held by RAILTEL giving opportunity to the Contractor to present his case.
- 9.8 In case of any damage to property due to lapses by the Contractor, RAILTEL shall have the right to recover the cost of such damages from the payments due to the Contractor after holding an appropriate enquiry.
- 9.9 In case of any delay in the completion of jobs due to mishaps attributable to lapses by the Contractor, RAILTEL shall have the right to recover cost of such delay from the payments due to the Contractor, after notifying the Contractor suitably and giving him opportunity to present his case.
- 9.10 If the Contractor fails to improve the standards of safety in its operation to the satisfaction of RAILTEL, after being given reasonable opportunity to do so and / or if the Contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorized RAILTEL official, RAILTEL shall have the right to take the corrective steps at the risk and cost of the Contractor after giving a notice of not less than seven days indicating the steps that would be taken by RAILTEL.
- 9.11 The Contractor shall submit report of all accidents, fires, Property damage and dangerous occurrences to the authorized RAILTEL official immediately after such occurrence, but in any case not later than 12 hours of the occurrence. Such reports shall be furnished in the manner prescribed by RAILTEL. In addition, periodic reports on safety shall also be submitted by Contractor to the authorized RAILTEL official from time to time as prescribed.
- 9.12 During the course of construction, alteration or repair scrap lumbars with protruding nails, sharp edges etc., and all other debris including combustible

scrap shall be kept cleared from working areas, passage ways and stair in and around site.

- 9.13 Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dropped, struck or permitted to strike each other violently. When cylinders are transported by powered vehicles, they shall be secured in a vertical position.
- 9.14 The Contractor shall be responsible for the safe storage of his radioactive sources.
- 9.15 All the Contractor's supervisory personnel and sufficient number of workers shall be trained for firefighting and shall be assigned specific fire protection duties. Enough number of such trained personnel must be available during the tenure of the contract.
- 9.16 Contractor shall provide enough fire protecting equipment of the types and numbers at his office, stores, erection site, other temporary structures, labour colony area etc. Access to such fire protection equipment shall be easy and kept open at all times. Compliance of the above requirement under fire protection shall in no way relieve the Contractor of any of his responsibility and liabilities to fire accident occurring. In the event fire safety measures are not to RAILTEL's satisfaction, RAILTEL shall have option to provide the same and recover the cost plus incidentals from Contractor's bills and / or impose penalty as deemed fit by the authorized representative of RAILTEL.

10.0 CONSEQUENCES OF CANCELLATION:

Whenever RAILTEL exercises its authority to terminate the contract/withdraw a portion of work under clause 7, the work may be got completed by any other means.

11.0 INSURANCE:

- 11.1 It shall be the sole responsibility of the Contractor to insure his workmen against risks of accidents and injury while at work as required by the relevant Rules and to pay compensation, if any, to them as per Workmen's Compensation Act. The Contractor shall also insure his staff against accidents. The work will be carried out in a protected area and all the Rules and Regulations of RAILTEL/its Client in the Project Area which are in force from time to time will be followed by the Contractor.
- 11.2 If due to negligence and/or non-observance of safety and other precautions, any accident/injury occurs to any other persons/public, the Contractor shall pay necessary compensation and other expenses, if so decided by the appropriate authority.
- 11.3 The Contractor will take necessary precautions and due to protect the material, while in his custody from any damage/loss till the same is taken over by RAILTEL or customer. For lodging/processing of insurance claim the Contractor will submit necessary documents. RAILTEL will reserve the right to recover the loss from the Contractor, in case the damage/loss is due to carelessness/negligence on the part of the Contractor. In case of any theft of

Material under Contractor's custody, matter shall be reported to police by the Contractor immediately and copy of FIR and subsequently police investigation report shall be submitted to RAILTEL for taking up with insurance.

12.0 STRIKES AND LOCKOUTS:

- 12.1 The Contractor will be solely responsible for all disputes and other issues connected with his workmen. In the event of Contractor's workmen resorting to strike or the Contractor resorting to lockout and if the strike or lockout so declared is not settled within a period of one month, RAILTEL shall have the right to get the work executed by employing its own men or through other agencies or both.
- 12.2 For any purpose whatsoever, the employees of the Contractor shall not be deemed to be in the employment of RAILTEL.

13.0 FORCE MAJEURE:

- 13.1 The following shall amount to force majeure conditions. Acts of God, Acts of any Government, War, Sabotage, Riots, Civil Commotion, Police Action, Revolution, Flood, Fire, Cyclone, Earthquake and Epidemic and other similar causes over which the Contractor has no control.
- 13.2 If the Contractor suffers delay in the due execution of the contract, due to delays caused by *force majeure* conditions, as defined above, the agreed time of completion of the work covered by this contract shall be extended by a period of time equal to the period of delay, provided that on the occurrence of any such contingency, the Contractor immediately reports to RAILTEL in writing the cause for the delay but the Contractor shall not be eligible for any compensation on this account.

14.0 GUARANTEE:

Even though the work will be carried out under the supervision of the authorized representative of RAILTEL, the Contractor will be responsible for the quality of the workmanship and shall guarantee the work done for a period of **one year from the date of completion of work** as certified by the authorized representative of RAILTEL and shall rectify free of cost to RAILTEL all defects arising out of faulty erection during the guarantee period starting from the date of completion of rectification. In the event of the Contractor failing to repair the defective works within the time specified by the authorized representative of RAILTEL may proceed to undertake the repairs of such defective works at the Contractor's risk and cost, without prejudice to any other rights and recover the same from out of any moneys payable to the Contractor or by other legal means.

15.0 ARBITRATION:

All disputes between the parties to the contract arising out of or in relation to the contract, other than those for which the decision of the Engineer or any other person is by the contract expressed to be final and conclusive, shall after written notice by either party to the contract to the other party, be

referred to sole arbitration of the Managing Director or his nominee. The arbitration shall be conducted in accordance with the provisions of the Arbitration and Reconciliation Act, 1996. The parties to the contract understand and agree that it will be no objection that the Managing Director or the person nominated as Arbitrator had earlier in his official capacity to deal directly or indirectly with the matters to which the contract relates or that in the course of his Official duties had expressed views on all or any of the matters in dispute or difference. The award of the Arbitrator shall be final and binding on the parties to this contract. In the event of the Arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason or his award being set aside by the Court for any reason, it shall be lawful for the Managing Director or his successor, as the case may be, either to act himself as the Arbitrator or to appoint another Arbitrator in place of the outgoing Arbitrator in the manner aforesaid. The Arbitrator may, from time to time, with the consent of both the parties to the contract, enlarge the time for making the award. Work under the contract shall be continued during the arbitration proceedings. The venue of the Arbitration shall be Delhi only.

- 16.0 The Tenderers has to enter in the register all the material / tools and plants brought to the site for working in the premises available with the Security Staff/Site In-charge/Site Register.
- 17.0 The Tenderers should get all the materials inspected and approved from the authorized representative of RAILTEL before use. In case of non-approval, if authorized representative of RAILTEL wish to check the material, cost of breakages and redoing the same Work will be the sole responsibility of the Contractor own.
- 18.0 The rates should be quoted in the same units as mentioned in the tender schedule.
- 19.0 The Bill of Quantities enclosed are very indicative and can vary as per the Site conditions, requirements of RAILTEL or Design of authorized representative of RAILTEL and the rates quoted shall not be subject to revision.
- 20.0 The rates quoted in the tender shall include all charges of material, labour, lifts, scaffoldings, any tools & plants, freight, labour conditions, fluctuations in the rates, Sales tax, excise duty, shift working, Octroi & other taxes and shall be firm for the duration of the contract and any extended period of the contract. No escalation in the rates shall be allowed under any circumstances even in case of extension of time period.
- 21.0 The successful Tenderer is bound to carry out all the items of work necessary for the completion of the job even though the same may not have been included in the schedule of quantities. Rates for such items shall be settled in consultation with authorized representative of RAILTEL.
- 22.0 The successful Tenderer will have to make samples (proto-type) of all the furniture items for the final approval of authorized representative of RAILTEL before taking up the entire execution of the work. In case of any modifications / additions, the same shall be incorporated in the entire furniture items without any additional financial implications.

23.0 Not used

24.1 RATES OF EXTRAITEMS/QUANTITY:

- (a) The rates of the extra items will be derived from the tender wherever possible.
- (b) In case the rates do not exist in the tender, the rate will be derived as per the market rates. The Tenderer shall submit analysis of rates as per Annexure, with assumption of any one item.
- (c) If the quantity of any item under execution is varying by $\pm 25\%$ of the total quantity (as per the Schedule of Requirement), the contractor shall have to execute the same item at similar rates as applicable in the contract agreement.

25.0 All the work executed should be got approved by the authorized representative of RAILTEL and in case of any bad workmanship pointed out shall be either rectified or be taken away from the site if it is not rectifiable and shall be replaced without any extra cost by the Tenderer.

26.0 The Tenderer should indicate the breakup of the items of %age of the unit cost for material, wastage, labour, taxes, profits & overheads, etc. separately. This %age shall be the basis for evaluation of the rates of the extra items.

27.0 Measurements of the items shall be as per the IS1200 / CPWD manual / BOQ units.

28.0 All Government taxes, levies etc. like Works Contract – Sales Tax, TDS shall be deducted from all the running bills of the Contractors.

29.0 All the works executed or under execution finished or semi-finished including all materials lying at site shall become the property of RAILTEL immediately on receipt of bills of the Contractors for the same.

30.0 The procurement of Cement, Steel, as required for completion of work shall be the responsibility of the Contractor.

31.0 All Fittings / Fixtures, Materials shall confirm to the relevant ISI specifications and approval of Authorized representative of RAILTEL.

32.0 TECHNICAL SPECIFICATIONS FOR CIVIL & STRUCTURAL WORKS

32.1 SITE PREPARATION

32.1.1. Extent of Work:

The work comprises all building works i.e., construction of the proposed building together with other ancillary works ordered by the Engineer for the construction, completion and maintenance (one year after completion) of the Project.

32.1.2. The Site:

The exact location of the site may be obtained from in-charge of the work. Site shall be investigated by tendering contractor who must judge themselves the conditions under which the work is to be carried out, access to the site, availability of material, water and labour, the nature of ground, the ground water table and other details

32.1.3. Temporary Access Roads:

The contractor shall provide any necessary temporary or light gauge tracks for access to work and maintain, alter and adopt as required and remove, on completion.

32.1.4. Facilities for Architect's site staff:

No used.

32.1.5. Drawings and Specifications to be returned:

Safeguard as necessary during the progress of the work, preserve and return drawings and specifications to the Consultant within one month from the date of the certified completion of work.

32.1.6. Excavation and Earth Work:

32.1.6.1. Setting Out – The setting out of the entire building shall be properly set out by Contractor as shown on the drawings and inspected and approved by the Consultant and his representative prior to commencing excavation.

32.1.6.2. Size and depth of excavations – Excavation shall be cut to the size and taken down to the formation level as per the Consultant's instructions.

32.1.6.3. Shoring and excavation – The sides of excavation shall be supported as necessary to maintain a vertical face and/or prevent caving in of any nature, especially during subsequent operations. The Contractor shall be responsible for design, supply, fixing, safety, and removal of all planking, strutting and shoring required to the sides of excavation.

32.1.6.4 Preparation and inspection of excavation – All excavations shall be kept free of water arising from whatsoever source and shall be properly cleaned out from all loose and foreign matters, leveled and rammed. The contractor is to report to Consultant when excavations are ready for inspection.

32.1.7. Filling

All filling materials shall be approved by the Consultant before being placed in position. Approved earth and sand shall be used to make up levels as shown on the drawings. The material shall be placed in successive layers each having a finished thickness not exceeding 20 cm watered, well rammed with mechanical rammers prior to the placement of the successive layer.

32.1.8. Disposal of surplus material:

All surplus excavated material not used in back filling or leveling shall be carted away from site.

32.1.9. Measurements:

32.1.9.1 The measurement of work shall be the exact length and width of the lowest steps of the footings according to the drawing of the Architect and the depth shall be measured vertically. It shall be priced per unit of cubic meter.

32.1.9.2 Rate for excavation shall include labour for returning, watering and ramming spoil of excavation between sides of trenches and foundation masonry and plinth, spreading on site, if required, and carting away surplus earth.

32.1.9.3 No extra shall be allowed for planning and strutting or shorting of sides of excavations for walls and piers and for keeping the excavation free from water unless otherwise specified.

32.1.10. Excavation in rock:

32.1.10.1 Cutting in rock shall be done either by blasting or chiseling as drafted to the required width and depths. As far as possible, the beds shall be in level.

32.1.10.2 Rock excavation shall be measured by working out sections by reference to levels before and after excavation, measured from a permanent benchmark.

32.1.10.3 In case of small work of rock excavation, the measurements of excavated rock shall be by stacks which shall be made with the spoils with leaving minimum voids and the rate shall be per unit of cubic meter.

32.1.10.4 A deduction of 20% shall be made in measurements for voids in well stacked depots.

32.1.10.5 The spoils of rock excavation will be the property of the employers.

32.2 GENERAL SPECIFICATIONS FOR RCC WORK

SPECIFICATION FOR REINFORCED CONCRETE WORK

32.2.1. General

- 32.2.1.1 All R.C.C. work shall be executed in strict accordance with the instructions, drawings and details of the Architect.
- 32.2.1.2 The rates for R.C.C. items shall include for all labour material (including form work), planks, tools and all the operations involved but shall exclude M.S. Reinforcement, which shall be measured and paid for separately.
- 32.2.1.3 The rate shall allow for chamfers, grooves, lines in R.C.C. members as well as necessary slope and drops, drip moulds, etc.
- 32.2.1.4 All M.S. reinforcement shall be measured on the quantity actually going into the job according to the drawing and detail. The rate allows for the wastage and binding wire which shall not be paid for separately. Overlaps will not be paid separately.
- 32.2.1.5 The work shall be in the conformity with the requirements of Indian Standard Code of Practice for Plain and Reinforced Concrete for General Building Construction IS:456 or latest relevant revision.

32.2.2. Portland Cement

- 32.2.2.1 Cement shall be ordinary setting cement of approved Indian Manufacturer and shall comply with Indian Standard Specification No. 269 for the time being in force for such cement. Compression tests on cements sand cubes shall be made as well as tensile tests.
- 32.2.2.2 All cement shall be fresh when delivered. Cement shall be delivered in sound and properly secured bags, barrels or other packages ready for immediate use and shall be used direct from bag or barrel.
- 32.2.2.3 Cement shall be stored in a perfectly water tight, well ventilated and otherwise suitable shed or go down, which will have a wooden floor. The wooden floor shall be raised not less than 150mm from the ground. If supplies of cement are arranged by owner it will be the responsibility of contractor to ensure adequate and proper storage. Damaged or partly set cement will not be permitted to be used, and shall be removed from the site. Consignment of cement shall be consumed in the order of their delivery. The contractor shall maintain sufficient stock of cement to ensure continuity the work and each consignment shall be stacked separately so as to permit easy access for inspection and identification.

32.2.3. Aggregates:

32.2.3.1 General:

Materials used as aggregate shall be obtained from a source known to produce aggregates satisfactory for concrete and shall be chemically inert, strong, hard, durable, of limited porosity and free from adhering, coatings, clay lumps, coal residues and organic or other impurities that may cause corrosion of reinforcement or may impair the strength or durability of the concrete. Aggregates shall be tested in accordance with the requirements of IS: 383 or IS: 515 and the results of such tests shall be as hereinafter specified, the percentage being by weight unless the context indicates otherwise.

32.2.3.2. Fine Aggregates:

32.2.3.2.1. Fine aggregates shall be natural sand or sand derived by crushing material like gravel or stone and shall be free from coagulated lumps. Sand derived from stone unsuitable for coarse aggregates shall not be used as fine aggregates. The caustic soda test for organic impurities shall show a colour not deeper than that of the standard solution. The amount of fine particles as ascertained by the Laboratory Sedimentation test shall not exceed 10% for crushed stone shall be made and after being allowed to set in for three hours the thickness of the layer of silt deposited on the coarser material shall not exceed 10%. The grading of a natural sand or crushed stone i.e. fine aggregate shall be such that not more than 5 (five) percent shall exceed 5mm in size, not more than 10% shall pass I.S. Sieve No.150 not less than 45% or more than 85% shall pass I.S. Sieve No.1. 18mm and not less than 25% or more than 60% shall pass I.S. Sieve No.600micron.

32.2.3.2.2. Only washed sand of quality and grading specified herein above shall be used. Admixture of sand obtained by crushing, natural stone may be permitted by the Consultant, provided the mixture satisfies the requirements for fine aggregates hereinafter specified. But not more than once part of the sand obtained by crushing natural stone may be added to two parts of washed sand.

32.2.3.3. Coarse Aggregate:

32.2.3.3.1. Coarse aggregates shall be crushed stone. The pieces shall be angular, rounded in shape and shall have granular or crystalline or smooth (but not glossy) non-powdery surfaces. Triable, flaky and laminated pieces and mice shall not be present.

32.2.3.3.2. The "aggregate crushing value" shall not exceed 45%. The amount of fine particles occurring in a free state or as a loose apparent shall not exceed 1%. When determined by the laboratory sedimentation test, after 24 hours' immersion in water. A previously dried sample of the coarse aggregates shall not have gained in weight more than 5%.

32.2.3.3.3. The grading of coarse aggregate shall be such that no more than 5% shall be larger than 20mm and not more than 10% shall be smaller than 5mm and not less than 25% or more than 55% shall be smaller than 10mm.

32.2.3.3.4. Maximum size of coarse aggregate shall be 20mm unless otherwise noted.

32.2.3.3.5. The grading of coarse aggregates of nominal size of 40mm shall be such that not more than 5% shall be larger than 40mm and not more than 5% shall be smaller than 5mm and not less than 10% or more than 10mm. 3.3.6 Aggregate (fine and coarse) shall be thoroughly washed with clean water if so directed by the Consultant.

32.2.4. Water:

32.2.4.1. Water shall be cleaned and fresh and free from organic or inorganic matter in solution or suspension. Filtered water shall be obtained from approved supply. Water from excavations shall not be used. Water used for washing aggregates, shuttering, curing concrete and for similar purpose shall be of the same quality as water used for mixing concrete.

32.2.5.0 Steel Reinforcement:

32.2.5.1. Mild steel bars shall be plain, round, hot rolled steel bars complying with the Indian Standard Specifications No.432. Specifications for Mild Steel and High Tensile Steel bars and hard drawn steel wire for concrete reinforcement.

32.2.5.2. Reinforcement shall be free pitting, loose rust, mill scale, paint, oil, grease, adhering earth, snow or ice or any other material that may impair the bond between the concrete and the reinforcement or disintegration of the concrete. Adhering cement wash shall be permitted.

32.2.5.3. Bars with kinks or sharp ends shall not be used.

32.2.5.4. Neither the size nor the length of a bar or wire shall be less than the size or length described in the bar schedule or elsewhere.

32.2.6.0 High Tensile Strength:

32.2.6.1 High tensile steel may be deformed or ribbed bars conforming to IS: 1139 cold twisted steel conforming to IS: 1786 bars and hard drawn steel wire and fabrics conforming to Indian Standard Specification No. 1566.

32.2.7.0 Proportions of Concrete:

32.2.7.1. For ordinary concrete the aggregates shall be measured by volume in any accurate gauge box or by other approved means. The gauge box or other approved container shall be filled without compacting with the aggregate to a pre-determined uniform depth, accurate allowance being made for bulking due to the moisture in the fine aggregate. The cement shall be measured by weight. One or more complete bags containing 50 kgs. of cement shall be mixed in the following proportion:

- (a) 1:2:4 concrete shall be mixed in the proportion of 50 kgs. of cement to 75 litres of sand (measured when dry) and 150 litres of coarse aggregate.

- (b) 1:½:3 concrete shall be mixed in proportion of 50 kgs. of cement to 50 litres of sand (measured when dry) and 100 litres of coarse aggregate. These quantities shall be altered if instructed and any alteration between the proportion of 1 part of fine aggregate to 1½ parts of coarse aggregate and 1 part of fine aggregate to 2 parts of the coarse aggregate shall be made without any alteration in the price of the reinforced concrete work. Any other special mixes shall be as directed by the Consultant.

32.2.7.2. For controlled concrete, the mix will be specified by grade of concrete and the minimum compressive strength for works test of hereinafter specified. However, the maximum total quantity of aggregate by weight per 50 kg. of cement shall not exceed 450kgs.

32.2.7.3. The contractor must submit, free of charge, a test report of sand and aggregate and grading of the same when required. If the grading is not proper, as per specifications, the mix is liable to change. The contractor must submit, while tendering his basic analysis for basis rates of concrete. This analysis will be taken as the basis for rates of any revised mixes.

32.2.7.4. Water:

32.2.7.4.1 Only water shall be added to the cement and aggregate during mixing to produce concrete having sufficient workability to enable it to be well consolidated, to be worked into the corners of the shuttering and around the reinforcement to give the specified surface finish, and to have the specified strength. Water cement ratio shall be maintained as per IS:456 when a suitable amount of water has been determined, the resulting consistency shall be maintained throughout the corresponding parts of the work and tests shall be conducted to ensure the maintenance of this consistency according to the standard method of test for consistency of concrete (slump test) asbelow:

32.2.7.4.2.

<u>Description of Work</u>	<u>Maximum Slump in mms</u>
Beams and slabs	100 to 150
Columns	125
Walls and stairs	100 to 125
Footings	80

32.2.7.5 Consistency:

If the difficulty be experienced in placing concrete of the specified proportions and approved consistency between and below the reinforcement bars, in the bottom of beams and similar members, the bars shall be embedded in concrete of approved workability by increasing the amount of cement as approved by using aggregates of approved smaller maximum size than specified.

32.2.7.6 Mixing Concrete:

32.2.7.6.1. The cement and aggregates shall be thoroughly mixed together in the proportions described in batch type mechanical mixer, unless otherwise approved. The water shall not be admitted to the drum of the mixer until all

the cement and aggregate constituting the batch are in the drum. Mixing shall continue until the concrete is uniform in colour and for not less than two minutes after all the materials and water is in the drum. The entire contents of the drum shall be discharged before the materials for succeeding batch are fed into the drum. No partly set or retempered concrete shall be used.

32.2.7.6.2. Partly set or excessively wet concrete shall not be used on the work and shall be immediately removed therefrom.

32.2.7.6.3. Hand mixing shall be allowed for small quantities with prior permission and approval of the consultant. It shall be carried out on a water tight platform and care shall be taken to ensure that mixing is continued until the mass is uniform in colour and consistency. For hand mixing 10% extra cement shall be used than normally required. Hand mixing shall be confined to one bag batch system.

32.2.7.7. Strength of Concrete:

32.2.7.7.1. The minimum quantity of cement for various proportions and their strength at 28 days for normal concrete shall be as follows: -

By vol. mix	Cement in kg/cub.mtr. of concrete	Preliminary test results for minimum crushing strength at 28days	Min. crushing strength at 28 days
1:4:8	180 kgs.	75 kgs/sq.cms.	78 kgs\sq.cms.
1:3:6	233 kgs.	100 kgs/sq.cms.	115 kgs/sq.cms
1:2:4.	323 kgs.	150 kgs/sq.cms.	225 kgs/sq.cms
1.1½:3	412 kgs.	200 kgs/sq.cms.	265 kgs/sq.cms.
1:1:2	640 kgs.	250 kgs/sq.cms	336 kgs/sq.cms

32.2.7.7.2. For controlled concrete by strength, the minimum stresses shall not be less than as specified below:

Grade in	Min. crushing at 7days Strength	kg/sq.cms @ 28 days
M-100	70	100
M-150	100	150
M-200	135	200
M-250	170	250
M-300	200	300
M-350	235	350
M-400	270	400

32.2.7.8. Distribution of Concrete:

Concrete shall be distributed from the mixer to the position of placing in the works by approved means which do not cause separation or segregation of aggregates or otherwise impair the quality of the concrete. Mixing and distribution equipment shall be cleaned before commencing mixing and distribution of the concrete and such equipment shall be kept free from set concrete.

32.2.7.9. Placing of Concrete:

32.2.7.9.1. Placing of concrete shall not commence before the shuttering and the reinforcement fixed position in the shuttering, has been inspected and approved by the consultant. The contractor shall maintain a record of such inspection and approvals and shall obtain all approvals to proceed with the placing of concrete in writing.

32.2.7.9.2. Before proceeding to place the concrete, the shuttering shall be realigned, if necessary, and water and rubbish therein shall be removed by approved means immediately prior to placing the concrete. The shuttering shall be wetted, except in frosty weather, and inspection opening shall be closed.

32.2.7.9.3. The interval between adding the water to the dry materials and completion of the placing of the concrete shall not exceed 20minutes.

32.2.7.9.4. Except where otherwise approved, concrete shall be placed in the shuttering by shovels or approved implements and shall not be dropped from a height or handled in a manner which will cause separation. Accumulations of set concrete on the reinforcement shall be avoided. Concrete shall be placed directly in its permanent position and shall not be worked along the shuttering to that position.

32.2.7.9.5. Each layer of concrete while being place shall be consolidated either by ramming, tamping or by mechanical vibration as required to form a dense material with all surface free from honey combing and free from water accumulating on the surface of newly placed concrete shall be removed by approved means. No further concrete shall be placed thereon until such water is removed.

32.2.7.9.6. No unset concrete shall be brought into contact with unset concrete containing cement of different type.

32.2.7.9.7. Unless otherwise approved, concrete shall be placed in a single operation to the full thickness of slabs, beams and similar members and shall be placed in horizontal layers not exceeding 1m deep in walls, columns and similar members. Concrete shall be placed continuously until completion of the work. Construction joints, as specified hereinafter, of a part up to approved extent. At the completion of a specified or approved part construction joint shall be made when the work is stopped.

32.2.7.9.8. All the concrete for the machinery or special foundations shall be cast in one operation and shall be machine vibrated.

32.2.7.10. Placing concrete in cold weather:

No concrete shall be mixed or placed while the temperature is below 40-degree C on a raising thermometer or below 4 degree C on a falling thermometer. The contractor shall supply an accurate maximum and minimum thermometer and hang it in an approved position on the works.

Aggregates that have been exposed to frost shall not be used until completely thawed. Concrete shall be maintained by approved means at a temperature of not less than 4-degree C during placing, and for a period of three days thereafter. All concrete placed during cold weather or when a frost is predicated or is likely to occur or occurs contrary to expectation, shall be protected from freezing by approved means.

32.2.7.11. Placing of concrete in wet weather:

Concrete shall not be mixed and/or placed in rainy weather or when there is likelihood of impending heavy showers. If it becomes necessary to place concrete during rainy weather the contractor shall provide adequate protection by means of tarpaulin or similar other waterproof material or immediately cover fresh concrete to prevent rain falling over it. This protection shall be left on the concrete for a period of 24 hours after placing of concrete.

32.2.7.12. Consolidated by mechanical vibration All concrete specified to be vibrated shall be consolidated by internal vibrators. The frequency of vibration shall not be less than 3000 complete cycles (or vibrations) per minute. The amount of water for mixing concrete shall be reduced for all concrete that is required to be compacted by vibration (about 20% less than the water used for concrete to be compacted by ramming and temping). Water required for mixing concrete that is to be consolidated by mechanical vibration shall be determined by slump test. As a general rule vibration should be stopped when air rubbles cease or practically cease coming up the surface and the surface itself is continuous.

Vibrations shall be inserted and withdrawn at many points from 0.5m to 1m apart from short intervals (usually from 5 to 15 seconds is sufficient) in preference to insertion for longer periods at wider intervals. Systematic spacing of insertions of the concrete remains un vibrated.

32.2.7.13. Construction joints:

- 32.2.7.13.1. Construction joints shall be provided in the position described on the drawings or elsewhere and where not so described on the drawings or else shall be in accordance with the following:
- 32.2.7.13.2. A joint shall be formed horizontally at the top of a foundation and 75mm below the lowest soffit of the beams meeting at the head of a column.
- 32.2.7.13.3. A joint shall be formed in the rib of a large tee beam and all beams 25mm below the soffit of the slab.
- 32.2.7.13.4. Concrete in a haunch or a splay on beam or a brace, and in the head of a column where one or more beams meet, shall be placed without a joint at the same time as that in the beam or beams or brace.
- 32.2.7.13.5. Concrete in the splay at the junction of a wall and slab shall be placed throughout without a joint, but if the provisions of a joint are unavoidable, the joint shall be vertical and the middle of a span.
- 32.2.7.13.6. A joint in the slab shall be vertical and parallel to the principal reinforcement, where it is unavoidable, at the right angles to the principal reinforcement, the joint shall be vertical and at the middle of the span.
- 32.2.7.13.7. Before placing new concrete against that has already hardened the face of old concrete shall be cleaned and roughened and scum and loose aggregate removed from the form. Immediately before placing the new concrete the face shall be thoroughly wetted and coating of neat cement grout applied thereto. The new concrete shall be well rammed against the prepared face before the grout sets.

32.2.7.14. Structure joints:

- 32.2.7.14.1. Expansion joints, hinges or other permanent structural joints shall be provided in the positions and of the form described in the drawings or elsewhere.
- 32.2.7.15. Protection and curing concrete
 - 32.2.7.15.1. Newly placed concrete shall be protected by approved means from frost, rain, sun and drying winds. Exposed faces of concrete shall be kept moist by approved means for 21 days after placing, except of there is a likelihood of curing water of damp covering, freezing, when the period shall be instructed by the consultants.
 - 32.2.7.15.2. Concrete placed below the ground shall be protected from failing earth during and after placing. Concrete placed in ground containing deleterious substances shall be kept free there from during placing and for a period of seven days or as otherwise instructed hereafter. The ground water around a structure below the ground shall be kept to an approved level of pumping, or the works shall be taken to prevent floatation. Approved means shall be taken to protect immature concrete from damage by debris, excessive loading, vibration, and abrasion, deleterious ground water, mixing with earth

or other materials, floatation and other influences that may impair the strength and durability of the concrete.

32.2.7.16. Removal of Shuttering:

32.2.7.16.1. Shuttering shall be removed by a gradual easing without jarring. Before removal of the shuttering, the concrete shall be examined and removal shall proceed only in the presence of a competent supervisor and after the concrete has attained sufficient strength to support, its own weight and any imposition of a load exceeding the design load is anticipated, proposal shall be provided in an approved manner, after removal of the shuttering and before the imposition of load exceeding the design load. The contractor shall record on the drawings or elsewhere the date upon which the concrete is placed in each part of the work and the dates upon which the shuttering is removed there from. The assessment concrete and removing the shuttering and consequence arising there from shall be the contractor's entire responsibility. Permissible tolerance in the dimension of form work shall be as per IS:456.

32.2.7.16.2. The shuttering for a part of a structure suspended from concrete placed subsequently to that or in the shuttering concerned shall not be removed until the supporting concrete has matured and such shuttering shall be prominently remarked as a warning against premature removal

32.2.7.17. Finish:

32.2.7.17.1. Honey comb surface shall be made good immediately upon removal of the shuttering and superficial water and air holes shall be filled in. Unless instructed placed against shuttering shall be rubbed down immediately upon removal of the shuttering to remove fins or other irregularities. The face of concrete for which shuttering is not provided other than slabs shall be smoothed with a wooden float to give a finish equal that of the rubbed down face where shuttering is provided. The top face of slabs which is not intended to be covered with other materials shall be leveled and floated while unset to a smooth finish at the levels of falls shown on the drawings or elsewhere. The floating shall be done so as to bring an excess of mortar to be the surface of the concrete. Concrete shall be so finished that no plaster work should be necessary.

32.2.7.17.2. Surface which are to be finished with plaster shall have indentations formed on them by approved implements to the depths and patterns required so as to provide key for the plaster or finishes.

32.2.7.17.3. All exposed concrete work shall be rubbed down smooth and not plastered but finished smooth and given one coat of cement wash without any extra charge when directed.

32.2.7.17.4. All concrete slabs, where directed shall be finished smooth and leveled with neat cement grout immediately after concreting without any extra charge.

32.2.7.18. Fittings and accessories:

- 32.2.7.18.1. Holes for bolts or for any other purpose shall be moulded during the work of concrete in the positions shown on the drawings. Openings already to receive pipes, wires and other fittings shall be formed where shown or otherwise detailed.
- 32.2.7.18.2. Bolts, pipe holes, hangers and other connections and fittings shown on the drawings or as directed by the consultant shall as far as practicable, be built in as the work proceeds.
- 32.2.7.18.3. Pipes for the conveyance of steam, water and gas etc. shall be carried along with exterior of the concrete work, except where special ducts for laying these pipes have been provided or otherwise as shown in the drawings. Conduit pipes for carrying electric cables, if so required, shall be embedded in concrete work or as directed by the consultant.

32.2.7.19. Testing of concrete:

- 32.2.7.19.1. The contractor must make his own arrangement for testing of the concrete blocks from time to time as required by the consultant and all the cost of testing and conveyance shall be borne by the contractor. At least three blocks of 150 x 150 x 1150 per 30 cm of R.C. work must be taken as directed and tested. The employer reserves right to test the blocks at the cost of contractor if the contractor fails to follow this clause.
- 32.2.7.19.2. The compressive strength shall be ascertained by crushing 150mm cubes of concrete. The cubes to be made on the works and tested in accordance with IS: 516. 7.19.3 Three test specimens shall be made for each stage at which tests are required. It is usual to cast six specimens and test three specimens at 7 days' age remaining three specimens at 28 days age, at every stage of construction or for every 30 cm concrete or as directed, tests shall be made. Testing of cubes shall be carried out at any approved laboratory and the results obtained shall be forwarded to the consultant. 7.20 Structure Tests
- 32.2.7.20.1. The consultant shall instruct the contractor to make a loading test on the works or any part thereof, if in the consultant's opinion, such a test is necessary. 7.20.2 The consultant shall instruct the contractor to make the test for the reason that the works cube tests show strength below the specified strength and/or because of one more circumstances attributed to alleged negligence on the part of the contractor and/or for the purpose of the testing the finished completed structure. The contractor shall include and allow the cost of test or tests in his prices and shall carryout them without additional payment.
- 32.2.7.20.3. For the purpose of testing floors, roofs and similar structure and their supports, in addition to all dead load supported by the structures, the test load shall be equivalent to one and a quarter times the live load (or super load) for which the works or part thereof to be tested has been designed, and all the test load shall not be applied within 28 days of the completion of placing of the concrete in the part of works to be tested, and the later shall be unsupported during the test by the shuttering or other non-permanent supports. The test shall be made as instructed.

32.2.7.20.4. For a test on a floor, roof or similar construction the result shall be deemed to be satisfactory if upon removal of the load the residual deflection does not exceed one quarter of the maximum deflection after maintaining the load in position. If the residual shall be repeated, and the result shall be deemed to be satisfactory if the residual deflection after removal of the load for the second time does not exceed one quarter of the maximum deflection occurring during the second test.

32.2.7.20.5. If the result of the tests is not satisfactory, the consultant shall instruct that the part of the works concerned shall be taken down or cut and the reconstructed to comply with this specification, or test other measures shall be taken to make the work secure. The contractor is liable to conduct the test at his own cost if directed and he shall also at his own cost take down or cut and reconstruct the defective work or shall execute remedial measures as instructed.

32.2.8. Reinforcement:

32.2.8.1. Cutting and bending of reinforcement:

32.2.8.1.1. All reinforcement bars shall be made perfectly straight before bending. Bars shall be bent by suitable machine or manually round a pin having a diameter of not less than 4 times the diameter of the bar, producing a gradual and even motion. Bars shall be bent cold unless the consultant shall approve bars of over 25mm in the size being hot. Bars bent hot shall not be heated beyond cherry red colour and after bending shall be allowed to cool slowly without quenching. Bars dependent on cold working for their strength shall always be bent cold.

32.2.8.1.2. Bars incorrectly bent shall be used only if the means used for strengthening and re-bending shall be such as shall not injure the material. No reinforcement shall be bent when imposition on the works, without approval whether or not it is partially embedded in hardened concrete.

32.2.8.1.3. Bending shall comply with the dimensions given in the bending schedule given by the consultant. Dimensions of bent bars and internal dimensions of binders and the like shall not be more than ½% shorter than the specified dimensions.

32.2.8.1.4. The internal radial of bends shall not be less than twice the size of the bars unless described to the contrary. The internal radial of the bends at corners of binders or the like shall be half the purpose of this requirement the size of a bar shall mean the diameter of a plain round bar or wire.

32.2.8.2. Fixing of Reinforcement:

32.2.8.2.1. Reinforcement shall be accurately fixed and by approved means maintained in the position described on the drawings or elsewhere in accordance with IS: 2502. Bars intended to be in contact at passing points shall be securely wired together at all such positions with No.16 gauge annealed soft iron binding wire, binders and the like shall tightly embrace the bars with which they are intended to be in contact and shall be securely wired, or if approved, welded thereto.

32.2.8.2.2. Bars shall be accurately set and held in place by system of bar chairs, bolsters, wire items, etc. of not less than 16 B.W.G. Spacing and location shall be shown on drawings.

32.2.8.2.3. Immediately before placing the concrete, the reinforcements shall be examined for accuracy of placing and cleanliness and corrected, if necessary.

32.2.8.2.4. Reinforcement projecting from work being concrete of already concreted shall not be bent out of its correct position for any reason unless approved and shall be protected from deformation or other damage. No reinforcement shall be placed in the same forms within 10m of concrete being poured.

32.2.8.3. Cover:

32.2.8.3.1. The cover of concrete to the reinforcement shall be as described on the drawings and shall be provided and maintained within a tolerance of 3mm under and over, by means of distance pieces of cement mortar or other approved material. Blocks of concrete on ground to hold the reinforcement, in proper level shall be of 225 kg. sqmm strength. The clear spacing between bars shall be not less than 1½ times the maximum size of the coarse aggregate not less than 25mm.

32.2.8.3.2. The vertical distance required between successive layers of bars or similar members shall be maintained by the provisions of mild steel space bars inserted at such intervals that the main bars do not perceptibly sag between spacebars.

32.2.8.4. Lapping and Splicing:

Bars shall be lapped as per I.S. Standards unless otherwise shown on the drawings. Splicing of bars shall be at selected positions to be at selected positions to be determined by the consultant.

32.2.8.5. Welding Reinforcement:

32.2.8.5.1. Welding may be permitted and shall be carried out as directed by the consultant, by competent and experienced welders, using electrodes and according to first class technique.

32.2.8.5.2. If butt jointing of reinforcement bars by electric arc welding be approved, the consultant's requirement of the regulations of the work as per IS: 456/1964 and IS 2751/1966 shall be complied with and all operations connected therewith shall be done only by man skilled thereat. These requirements shall not apply to the spot welding of binders or the like, to main bars, where approved of, to electrically welded fabric.

32.2.8.6. Exposed Reinforcement:

32.2.8.6.1. Exposed reinforcement intended for bending with future extensions shall be protected from corrosion.

32.2.9. Shuttering and formwork:

32.2.9.1. General:

- 32.2.9.1.1. The contractor shall be responsible for the sufficiency of the form work. If so instructed, calculations and designs for the shuttering shall be submitted for approval before construction. Form work may be on plywood, metal rough board or concrete.

32.2.9.2. Fixing of Shuttering:

Shuttering for concrete shall be rigidly constructed of material and shall be true to the shape and dimensions described on the working drawings. Timber shall be well seasoned, free from loose knots and wrought on all faces. Faces in contact shall be free from adhering, grout, projecting, nails, splits or other defects. Joint shall be sufficiently tight to prevent of cement grout and to avoid the formation of fins or other blemishes. Faulty joints shall be caulked. Where described on the working drawings or elsewhere, the position and direction of the joints shall be as so described. Opening for inspection of the inside of the shuttering and for the escape of water used for washing out shall be formed so that they can be conveniently closed before placing the concrete.

32.2.9.3. Connections:

- 32.2.9.3.1. Connections shall be constructed to permit easy removal of the shuttering and shall be either nailed, screwed, bolted, clamped, wired or otherwise secured so as to be strong enough to restrain the correct shape during consolidation of the concrete. Bolt holes in concrete shall be made good after removal of the bolts. Wire ties passing through concrete shall be used only where approved and the ends of the wires shall be concealed and measured taken to prevent rust stains on the concrete.

32.2.9.4. Sloping Work:

Shuttering shall be provided for the top faces of slopping work, and anchored to prevent floatation where the slope exceeds 1 in 1½.

32.2.9.5. Deflections:

Shuttering shall be true to line and braced and structured to prevent deformation under the weight and pressure of the wet concrete, constructional loads, wind and other forces. The deflection shall not exceed 3mm. Bottom of beams boxes shall be erected with an upward camber of 6mm for each 3m of span.

32.2.9.6. Beams and Slabs:

The shuttering of beams and slabs shall be erected so that the shuttering on the sides of the beam and of the soffits of slabs can be removed without disturbing the beam bottoms. Reproping of beam shall not be done except with the approval of the consultant. Props may be reinstated in anticipation of loads in excess of the design load. Vertical props shall be supported on wedges, or other measures shall be taken when commencing to remove the shuttering. Props for an upper storey shall be placed directly over those in the lower storey and sufficiently.

32.2.9.7. Columns In the shuttering for a column, one side shall be left open and shall be built upon in sections as placing of the concrete proceeds.

32.2.9.8. Fixtures:

Before placing the concrete, bolts and fixings shall be in position and cords and other devices used for forming openings holes, pockets, chases, recessed and other cavities shall be fixed to the shuttering. No holes shall be cut in any concrete unless approved.

32.2.9.9. Mould Oil:

Any approved mould oil or other material shall be in position, and cords and other devices used for forming openings holes, pockets, chases, recesses and other cavities shall be fixed on the shuttering. No holes shall be cut in any concrete unless approved.

32.2.9.10. Props:

The props used for shuttering shall be of full length. Joined props shall not be allowed. They should be of sufficient size and suitably placed as per the instructions of the consultant. Where shuttering at high altitude is to be done, the contractor shall provide special props and beams to the approval of the consultant.

32.2.9.11. Removal of Shuttering:

The shuttering will be struck for different parts of the structure, after expiry of the following periods, unless stated otherwise:

Vertical sides of slabs, beams and columns	:	48hours
Bottom of slabs up to 4M span	:	7 days
Bottom of slabs above 4M span, bottom of beams up to 5M span and arch rib bottom upto 5M	:	14days
Bottom of beams over 5M span and arch rib bottom above 5M span	:	21days

32.2.11. Measurements:

32.2.11.1. General:

32.2.11.1.1. The item rates shall be cost of all materials (unless otherwise specified) including labour tools, plants and other accessories required completing the job in workman like manner.

32.2.11.1.2. Mode of measurement of items of reinforced concrete work shall be as stated below and shall be the net cubic meter as specified in the schedule of quantities or then eater of specified thickness of cast concrete. The

thickness of plaster finishing shall not be taken into account in measuring the work even though the price may be of structural members in concrete, the measurement of encased concrete shall be net cubic meter as specified without any deduction of structural members.

32.2.11.1.3. No extras shall be paid for provision of pockets and holes up to 150mm x 150mm areas but concrete will be paid without deduction for such holes in pockets and holes larger than 150mm x 150mm actual areas of shuttering will be paid at rates in the schedule, but the volume of pockets will be deducted from the concrete, quantities.

32.2.11.1.4. If due to some fault or mistake of the contractor, the sizes cast are more than those shown on the drawing, the contractor shall be paid only as per the sizes shown on the drawings. In case the sizes are cast smaller than those shown on the drawings, the contractor shall rectify the same or if similar size is approved by the consultant, it may be allowed, but the actual size cast will be paid to the contractor.

32.2.11.1.5. No extra will be paid for placing cable and other pipes, anchor bars or bolts, anchor rails etc., which will be supplied by the employer.

32.2.11.2 Concrete:

32.2.11.2.1. Footing and rafts shall be measured in cubic meter.

32.2.11.2.2. Columns shall be measured in cubic meter being the products of the area of cross section multiplied by the height, as measured in between the top of footings or slab to the underside of slab immediately above as per drawings. In case slabs of different thickness the underside of the thicker slab shall be guiding factor.

32.2.11.2.3. Rectangular beams and lintels shall be measured in cubic meter being the product of the cross sectional area and length between supporting columns or beams. Where such beams or lintels rest on masonry work, the length is equal to the clear distance between the faces of masonry plus the length of bearings as shown on the drawings.

32.2.11.2.4. T & L Beams (i.e. beams cast with floor or roof slabs) shall be measured in cubic meter. The length shall be the distance between the faces of supporting columns or the faces of the supporting beams or girders, the breadth shall be the breadth of the stem projecting below the slab and the depth shall be the portion projecting below the underside of the slab (thicker one in case of slabs of different thickness). It shall be the net cubic contents of the portion projecting below the underside of the thickest slab and between the faces of supporting beams or columns.

32.2.11.2.5. Slabs, cornices, projections, stairs, waist slab and the triangular concrete portion of steps shall be measured in cubic meter, or in sq. meter with specified width, in case of slabs of different thicknesses, thicker slab will be measured upto the face of the beam on the side of the thinner slab.

32.2.11.2.6. Chajjas shall be measured in square meter or cubic meter being the products of the projection beyond the face of supporting beams and the length and of average thickness as per drawing.

32.2.11.2.7. Pardi walls, partition walls, drop walls, railing walls, fins of specified thickness, coping, etc. shall be measured in square meter or cubic meter.

32.2.11.3. Shuttering and Form Work 11.3.1 Shuttering is to be measured as the area in square meter of the finished structure which is required to be supported during the deposition of concrete.

32.2.11.3.2. The shuttering required to form the construction joints, skew backs, stunt ends, stepping, the bonding, chases and the like, which may be necessary to uphold the concrete during the operations of deposition and setting shall not be measured and hence the cost of this is to be covered by the rate of concrete.

32.2.11.3.3. Where shuttering is included in the item rates of concrete, shuttering will not be measured separately.

32.2.11.4. Steel Reinforcement:

32.2.11.4.1. The unit of weight shall be 1 M. Tonne or 1000kg.

32.2.11.4.2. The reinforcing bars or rods are to be measured according to the weight as calculated from the drawings. The basis of calculated weights shall be as per I.S. Specifications. No allowance being made for waste or rolling margin.

32.2.11.4.3. The length of the bars shall be the total length to be cut as shown in the drawing or as specified by the consultants including hooks, bends, loops etc.

32.2.11.4.4. Binding wire required for tying reinforcement shall not be measured. The items rate shall include the same.

32.2.11.4.5. Pins and other types of special supports required for supporting reinforcement shall be measured.

32.2.11.4.6. The laps provided as per drawing and/or instructions shall be paid for where they are unavoidable. Alternatively, the bars may be welded if permitted by the consultant for which the cost of laps will be paid. The consultant's decision with regard to the necessary and/or regarding the position of laps or welds shall be final.

32.2.11.4.7. No allowance shall be made for wastage. The item rate shall include the same.

32.2.11.4.8. The concrete briquettes required for providing proper cover over to reinforcement shall not be measured. The item rates shall include the same.

32.3 BRICK MASONRY

32.3.1. General:

- 32.3.1.1. All brick work shall be carried out as shown on the drawings with set backs, projections, cuttings, tooling, etc.
- 32.3.1.2. Whenever the proportion of cement mortar has not been specifically mentioned, cement mortar in the proportion of 1:6 (cement: sand) shall be used.
- 32.3.1.3. All external brick walls shall be built with cement mortar having proportion of 1:5 (cement: sand).
- 32.3.1.4. Flat brick arches shall be provided wherever required without any extra cost.
- 32.3.1.5. Brick work shall be kept wet while in progress till mortar has properly set. On holidays or work is stopped, top of all unfinished masonry shall be kept wet.
- 32.3.1.6. If the mortar becomes dry, whit or powdery, for want of curing, work shall be pulled down and rebuilt at the contractor's expenses.

32.3.2. Material:

32.3.2.1. Bricks:

The bricks shall generally comply with IS: 1077. The bricks shall be the best quality locally available, table moulded, well burnt, have plane rectangular faces with paralleled sides and sharp right angled edges, have a fine compact and uniform texture. The bricks shall be free from cracks, chips, flaws, stones or lumps of any kind and shall not show efflorescence either dry or subsequent to soaking in water.

The brick shall smite a clear ringing sound on being struck and shall not absorb water more than 20% by weight.

Common building bricks shall have a minimum compressive strength of 35 kg./sq.cm. unless otherwise stated in the schedule of quantities.

32.3.2.2. Cement:

Unless otherwise specified the cement to be used shall be ordinary Portland cement complying with the latest publication of IS: 269.

32.3.2.3. Lime:

Lime shall comply in every respect with the requirements of IS: 712.

Lime shall be made from approved lime stone or kankar and properly burnt. It shall be free from excess or unburnt kankar or lime stone ashes or any other extraneous materials.

Lime shall be stored in weather proof sheds. Lime which has been damaged by rain, moisture or air slaking shall not be used and shall be removed from the site of work immediately.

Lime shall be slaked with fresh water and screened through appropriate screen and stored and used within 14 days provided it is protected from drying out.

Field tests according to ISL 1624 shall be carried out from time to time to determine the quality of lime.

32.3.2.4. Sand:

Sand shall conform to ISL 383 and IS: 515.

Sand shall pass through 1.5 sieve 4.75mm (3/16 B.S.) test sieve, leaving a residue not more than 5%. Sand shall be from natural source or crushed stone screenings, chemically inert, clean, sharp, hard, well graded and free from dust, clay, shale, large pebbles, salt, organic matter, mica or other deleterious matter. The sum of all deleterious material in sand shall not be more than 5% by weight.

Sand shall be washed, if directed, to reduce the percentage of deleterious substances to acceptable limits.

32.3.2.5. Water:

Water for mixing cement/lime mortar shall be clean and free from acids, vegetable matter, etc. Only water fit for drinking shall be approved for use. In case of doubt, water shall be tested in approved lab at contractor's expense.

32.3.2.6. Mortar:

The mortar to be used for brick masonry shall be from cement/ lime as instructed by the Architects. The ingredients in the proportions specified shall be measured in gauge boxes and thoroughly mixed dry on a clean approved platform with water added afterwards until all parts are completely incorporated and brought to a proper consistency and used within an hour.

No partially or wholly set mortar will be allowed to be used or re-mixed.

When large quantities are required, the mortar shall be mixed by mechanical means.

32.3.3. Workmanship:

32.3.3.1. Bricks shall be thoroughly cleaned, well wetted and soaked in fresh water for at least 12 hours before using it.

32.3.3.2. English bond shall be used throughout in walling except brick on edge and half brick walls shall be built in structure bond. A good bond shall be maintained throughout the work, both laterally and transversely.

32.3.3.3. All brick work shall be set out and built to the dimensions shown horizontal and in plumb with the frogs facing upwards. Vertical joints shall not exceed 10mm thickness and shall be full of mortar.

32.3.3.4. No broken bricks shall be used except as closers.

32.3.3.5. After days work all joints shall be raked to 12mm before commencing further brickwork.

32.3.3.6. The top of walling shall be wetted where let off, before commencing further brickwork.

32.3.3.7. Whole of the masonry work shall be brought up at one uniform level, throughout the structure. Where breaks are unavoidable, joints shall be made in good long steps. All junctions of walls and cross walls shall be carefully bonded into the main walls.

32.3.3.8. During rains, the work shall be carefully covered to prevent mortar being washed away. Should any mortar or cement washed away, the work shall be removed and rebuilt at the contractor's expenses.

32.3.3.9. Mortar to be used shall be as specified in respective items.

32.3.3.10. The wall shall be kept wet for three days after construction.

32.3.3.11. Wooden plates, door frames or window frames shall be bedded in brick work with fixing clamps or holdfasts embedded in courses of brickwork.

32.3.4. Mode of Measurement:

32.3.4.1. Finishes to brick work such as plaster and cement pointing will be paid for separately under plaster.

32.3.4.2. 75mm thick 1:2:4 PCC band shall be provided in half brick thick partition walls and in brick on edge walls at every 1.5M height or as directed PCC band shall not be measured and paid separately.

32.3.4.3. One brick or more thick walls shall be measured in cubic meter that is length and height multiplied by the thickness. Thickness shall be measured in multiples of half brick which shall be deemed to be inclusive of mortar joints. Half brick thick or brick-on-edge walls shall be measured in square meter.

Date: _____

**SIGNATURE OF TENDERER
WITH STAMP**

SECTION – III

SPECIAL CONDITIONS OF THE CONTRACT

1. The Tenderer should study all the Tender documents carefully and understand the conditions, drawing, specifications, design etc. before quoting. In case of non-availability of any information or documents in the Tender Document or if there are any doubts, the Contractor shall obtain clarification either from authorized representative of RAILTEL in writing before submission of Tender and authorized representative of RAILTEL shall not be responsible for the same in any manner whatsoever. In case of any discrepancy, the sequence for execution of Works shall follow as mentioned below: -
 - (a) Detail Drawings.
 - (b) Bill of Quantities.
 - (c) Instructions.
2. The Tenderer shall take work permit from the concerned authorities, if required, before starting the Work.
3. The Tenderer has to obtain the required security permissions from the concerned authority prior to the commencement of the Work and should furnish the list of workers/staff for issue of temporary passes, if required.
4. This being a %age bidding system, the Tenderers, in effect, accept the work for all the items in the Tender schedule. The %age rates should be expressed both in figure and in words, where discrepancy exists between the two; the rate expressed in words will prevail. Similarly, if there is any discrepancy between the unit rate and the amount, the unit rate will prevail.
5. All entries in the Tender document should be in ink/typed. Corrections, if any should be attested by full signature of the Tenderer.
6. The Tenderer or his authorized representative shall sign every page of the Tender documents. (Power of Attorney to be submitted)
7. All erasures and alterations made while filling. The Tender must be attested by initials of Tenderers. Over writing of figures is not permitted.
8. No page of this Tender shall be removed and the set must be submitted as it is. EACH PAGE OF THE TENDER FORM IS TO BE SIGNED ALONG WITH THE STAMP OF THECOMPANY/FIRM.
9. RAILTEL do not bind themselves to accept the lowest Tender and reserves the right to reject any or all the Tenders.
10. Joint Tenders shall not be accepted/considered.
11. Contractor shall use the Specifications & Design out of the Choices, as informed by the authorized representative of RAILTEL. No request shall be entertained for changes of Design or Specifications.

12. The Tenderers shall remove all debris/wastes etc. wash and clean the floors and hand over the site quite clean on completion of the work.
13. In case of non-completion or delay in completion of the work or removal of defects in time, RailTel Corporation of India shall free to appoint another agency to get the job done at the Tenderer's cost.

14. PENALTY FOR DELAY IN COMPLETION (i.e., LDC clause)

- 14.1 If the contractor fails to execute and complete the work within the time specified in the Agreement or within the period of extension granted, the contractor shall accept reduction in the total amount payable to him by the RailTel at the rate of 0.5% per week or part thereof (rounded off to the nearest whole number) of the total value of the contract for the actual delay occasioned beyond the appointed time by which the work shall have been completed under the contract.
- 14.2 The total value of reduction on account of above shall be limited to maximum of 10% (Ten percent) of the total contract value.
- 14.3 Such reduction shall be accepted by the RailTel in full satisfaction of the contractor's liability arising from delay only. This reduction of value for delay in completion will be applicable separately for each stage of completion of work. When two or more stage of completion are specified in the contract, the purchaser's engineer shall at his sole discretion specify a time limit within which the unfinished portion of the work shall be completed after serving on the contractor a notice of Purchaser's intention to recover the said penalty. In the event of failure of the contractor, the purchaser shall be at liberty to take action in accordance with provisions in the contract.
- 14.4 Such reduction shall be accepted by the purchaser in full satisfaction of the contractor's liability arising from delay only. This penalty for delay in completion will be applicable separately for each stage of completion of work when two or more stage of completion is specified in the contract. The purchaser's engineer shall at his sole discretion specify a time limit within which the unfinished portion of the work shall be completed after serving on the contractor a notice of Purchaser's intention to recover the said penalty in Form5.

NOTE: For purpose of this Para the value of work shall be calculated on the basis of unit prices included in schedule of requirements.

15.0 ADHERENCE OF TIMESCHEDULE

- 15.1 Timely completion of the work is the essence of the contract. Any delay in execution will attract penalty as indicated in clause 14.1 of Special Conditions of Contract.
- 15.2 If any delay as aforesaid in clause 14 shall have arisen from any cause which the RAILTEL may agree as being a reasonable ground for extension of time, the authorized representative of RAILTEL may allow such additional time as he may in his absolute discretion consider to be

reasonably justified by the circumstances of the case. Such extensions shall be granted, on request from contractor, with or without liquidated damages in the FormNo.5.

16. The work as detailed in this Tender shall be executed and completed in all respects in accordance with the Tender document, instruction to Tenderers, Bill of Quantities, Conditions of the Contract, technical specification, schedules and Drawings to the satisfaction of authorized representative of RAILTEL.

SIGNATURE OF TENDERER WITH STAMP

Section IV

FORMS OF TENDER

Form No.1	:	Analysis Of Unit Rate Quoted / Rates Of Extra Items / Rates Of Reduction Items
Form No.2	:	Agreement
Form No.3	:	Contract Performance Guarantee Bond
Form No.4	:	Declaration
Form No.5	:	Extension of period of completion of work on account of contractor
Form No.6	:	Statement of Deviations

**ANALYSIS OF UNIT RATE QUOTED / RATES OF EXTRA ITEMS /
RATES OF REDUCTION ITEMS****IN PERCENTAGE (Break up)**

1. Material Cost inclusive of all Taxes :
2. Wastage :
3. Sundries consumable, carriage etc. :
4. Labour Charges :
5. Overheads & Profits :
(Inclusive of I. Tax, Works Contract
Tax, Sales tax and other Statutory
Deduction)

TOTALSUM**100%**

**SIGNATURE OF TENDERER
WITH STAMP**

AGREEMENT

An AGREEMENT made this _____ day of _____
Two thousand twelve between RailTel Corporation of India Limited, Eastern Region, Kolkata – 700 071, acting the _____ premises through Executive Director or his successor _____ of M/s RailTel Corporation of India Limited, Eastern Region, Kolkata – 700071 (hereinafter referred to as 'RailTel') of one part and M/s _____ (hereinafter referred to as 'contractor') of the other part.

Whereas in response to a call for Tender for the Works i.e., "Construction of Telecom Hub cum office for RailTel & Railway at Karbhigahia side, Patna" as per Tender papers at Annexure 'A' hereto, the Contractor has submitted a Tender as per Annexure 'B' hereto and whereas the said Tender of the Contractor has been accepted for as per copy of Letter of Acceptance of Tender No. _____ dated _____ complete with enclosures at the accepted rates and agreed deviations from Tender Papers _____ as per Annexure-C hereto and at an estimated contract value of Rs. _____ (Rupees _____ Only).

Now this agreement witnesses that in consideration of the premises and the payment to be made by the Purchaser to the Contractor provided for herein below the Contractor shall supply all equipment and materials and execute and perform all works for which the said Tender of the Contractor has been accepted strictly according to the various provisions in Annexure 'B' and 'C' hereto and upon such supply, execute and performance to the satisfaction of the purchaser and the purchaser shall pay to the Contractor at the rates accepted as per the said Annexure 'C' and in terms of the provisions therein.

In the witness where of the parties have hereunto set and subscribed their respective hands and/or seals day and year respectively mentioned against their respective signatures.

Signed and delivered at _____ by Shri _____
for and on behalf of M/s. _____.

The contractor within named in the presence of:

1. Signature
 Date
 Name in Block Capitals
 Address
2. Signature
 Date
 Name in Block Capitals
 Address

Signed and delivered at _____ for and on behalf of RailTel by Shri
_____(Managing Director or his successor) in the presence of:-

1. Signatures
Date
Name in Block Capitals

2. Signature
Date
Name in Block Capitals

Address:

Annexure 'A'	:	Tender Paper No.
Annexure 'B'	:	Firm's Tender No.
Annexure 'C'	:	Letter of Acceptance

(Signature)_____

Complete with enclosures

Dated:

CONTRACT PERFORMANCE GUARANTEE BOND

(On Stamp Paper of Rs one hundred)
(To be used by approved Scheduled Banks)

In consideration of the RailTel Corporation of India Limited, 6th, IInd Block, Delhi Technology Park, Shastri Park, Delhi – 110053 with Eastern Regional Office at 16th. Floor, Chatterjee International Centre, 33A Jawaharlal Nehru Road, Kolkata – 700071 (Herein after called the "RailTel") having agreed to exempt (Hereinafter called "the said Contractor(s)") from the demand, under the terms and conditions of an Agreement No. dated made between RailTel Corporation of India Limited and for (hereinafter called "the said Agreement") of security deposit for the due fulfillment by the said Contractor(s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs. (Rupees. only). We, (indicate the name of the Bank) hereinafter referred to as "the Bank") at the request of Contractor(s) do hereby undertake to pay the RailTel an amount not exceeding Rs. against any loss or damage caused to or suffered or would be caused to or suffered by the RailTel by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.

We,(name of Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount as claimed is due by way of loss or damage caused to or would be caused to or suffered by the RailTel by reason of breach by the said Contractor(s) of any of terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....only.

We,(name of bank) undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Supplier(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal.

The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Supplier(s) shall have no claim against us for making such payment.

We,(name of bank) further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the We

shall be discharged from all liability under this Guarantee thereafter.

We,.....(name of bank) further agree with the RailTel that the RailTel shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time or to postpone for any time or from time to time any of the powers exercisable by the RailTel against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.

This Guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s)/ Supplier(s).

We (Name of Bank) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.

NOT WITHSTANDING ANYTHING CONTAINED HEREIN ABOVE

- (i) The liability of the surety under his Bank Guarantee shall not exceed Rs..... (Rupeesonly).
- (ii) This Bank guarantee shall be valid upto.....
- (iii) We are liable to pay the guaranteed amount or nay part thereof under this Bank Guarantee only and only if you serves upon the bank, written claim or demand on or before.....

Dated theday of 2014

for
(Indicate the name of the Bank)

Witnesses :

Signature :
Name :

Signature :
Name :

NOTE: The Guarantee shall be valid for a period off our months after the expiry of the warranty period of the equipment as per clause16.2.

Tender No: _____

Dated: _____

DECLARATION

1. I/We hereby declare that I/We have read and understand the Conditions of Contract, Specifications, Drawings, Schedule of Quantities etc. and hereby agree to abide by them. In token thereof I/We have signed below and at the end of Schedule of Quantities. I/We also understand that otherwise this tender is liable to be rejected.
2. I/We understand that our tender will not be considered, if the rate is not written both in Figure & Words.
3. I/We hereby confirm that only the relevant entries asked for have been made within the tender documents issued to us. I/We also confirm that in the event of any entry in this document, other than the relevant entry, shall make this tender invalid.
4. I/We hereby agree to obtain the registration number under the Contract Labour Act by registering with the Labour Commissioner and furnish the registration details to RailTel Corporation of India Limited.
5. I/We hereby also agree to get my/our firm registered with the Sales Tax Department of Government of West Bengal for Works Contract Tax as per West Bengal Sale Tax rules, if applicable.
6. I/We hereby agree to obtain Employer's number from the Employee's State Insurance Corporation and the Provident Fund Commissioner. In the event of our not being able to provide the above said number, I/We agree to RailTel Corporation of India Limited retaining appropriate amounts at the stipulated percentage rates towards ESIC and PF covering employees and employers contribution from our interim and final bills and refunding the same to us on our providing the proof of having complied with the requirements of the relevant Acts regarding payment. We also agree that in case, I/We are unable to obtain these numbers for ESIC and PF, RailTel Corporation of India Limited may remit such amounts to the appropriate authorities.
7. I/We agree to submit to RailTel Corporation of India Limited necessary reports and returns as required for compliance of ESIC & PF regulations.
8. I/We hereby confirm that the percentage of Labour component in the above work is _____ (In Words _____).

Date: _____

Place: _____

**SIGNATURE OF TENDERER
WITH STAMP**

**EXTENSION OF PERIOD OF COMPLETION OF WORK
ON CONTRACTOR'S ACCOUNT**

No.

Date:

To,

.....

.....

Sub: (i) LOA No.
(ii) Name of Work)
(iii) Acceptance Letter No.
(iv) Undertaking / Agreement No.

Ref: (Quote specific application of the Contractor for extension to date, if received).

Dear Sir,

The stipulated date for completion of the work mentioned above is From the progress made so far and the present rate of progress, it is unlikely that the work will be completed by the above date (or However, the work was not completed on this date)

Expecting that you may be able to complete the work if some time is given the Executive Director, Eastern Region, Projects RailTel Corporation of India Limited, Kolkata - 71 although not bound to do so, hereby extends the time for completion from to..... .

Please note that an amount equal to 0.5% per week or part thereof with upper limit of 10% of contract value for the unfinished portion of the work will be deducted from your dues as a recovery for delay in the completion of the work after the expiry of..... for the extended period notwithstanding the grant of this extension. You may proceed with the work accordingly. **(Applicable when the extension has been granted with liquidated damages)**

The above extension of the completion date will also be subject to the further condition that no increase in rates on any account will be payable to you.

Please intimate within a week of the receipt of this letter your acceptance of the extension on the conditions stated above.

Please note that in the event of declining to accept the extension on the above said conditions or, in the event of your failure after accepting or acting up to this extension to complete the work by..... (Here mention the extended date), further action will be taken in terms of relevant para of special conditions of contract.

Yours faithfully,
For & on behalf of
RailTel Corporation of India Limited

Note:

1. [Give here the stipulated date for completion without any penalty fixed earlier.]
2. [Here mention the extended date.]

Statement of Deviations

PROFORMA FOR STATEMENT OF DEVIATIONS

3. The following are the particulars of deviations from requirement of the Instructions to Tenderers and Conditions of Tendering, Preamble and Special conditions of Contract.

4. Section I

Clause	Deviation	Remarks (Including Justification)
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4.2 Section II

Clause	Deviation	Remarks (Including Justification)
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4.3 Section III.

Clause	Deviation	Remarks (Including Justification)
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5. The following are the particulars of deviations from requirement of the technical specifications.

Annexure	Clause	Deviation	Remarks (Including Justification)
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Notes:

Where there is no deviation, the statement should be returned duly signed with an endorsement indicated no deviations.

SIGNATURE AND SEAL OF THE
MANUFACTURER/TENDERER

SCHEDULE OF ITEMS AND QUANTITIES

Name of Work: Construction of G+2 std .Bldg. of Telecom Hubs cum office for RailTel /ER, Patna &Railway (Near RRI Building) of E.C. Railway at Patna.

Civil Works (Schedule-A):

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
1.	Providing, driving and installation Bored cast in Situ R.C.C piles of 400 mm.dia. and length below pile cap in M-35 grade Design Mix Cement concrete Complete. Length of the pile for payment shall be measured up to the bottom of pile cap excluding the mud mat.(Payment for cement, casing pipe & Reinforcement shall be paid extra) .	400	Meter	4440.74	1776296.00
2.	Providing, fabricating and installation casing pipe for bored piles for all diameters with specified thickness of Steel plate etc. complete.	1	MT	98313.55	98313.55
3.	Extra for chiseling in addition to boring of piles, etc. complete.	10	Meter	564.85	5648.50
4.	Conducting Routine Load test up to 50 Ton capacity pile in accordance with “IS Code of practice IS: 2911(Part-IV).	1	Each	34026.06	34026.06
5.	Conducting Lateral Load test up to 10 Ton capacity pile in accordance with “IS Code of practice IS:2911(Part-IV).	1	Each	34189.74	34189.74
6.	Supply of Ordinary Portland Cement Grade-53	20	MT	10393.11	207862.20
7.	Earth works in excavation as per approved drg.for all kind of soils including leading up to 50Metre.and 1.5 m.lift.	150	Cu.m.	124.10	18615.00
8.	Earth infilling in foundation trenches and plinth with surplus earth, leveling, dressing, watering complete as per specification.	50	Cu.m.	28.88	1444.00
9.	Single brick flat soling including ramming and dressing in foundation & plinth as per specificationcomplete.	50	Sq.m.	406.52	20326.00

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
10.	R.C.C. works in foundation trenches, Column, plinth, Slab, Beam, Lintel, Chajja, O.H & U.G Water Reservoir etc.Complete. a)M10 b)M20 c)M25	10 100 300	Cu.m. Cu.m. Cu.m.	4279.20 6418.80 7488.60	42792.00 641880.00 2246580.00
11.	Brick work in Cement mortar: a)125 mm.th. Brick work (1:4) b) 250 mm. th. Brick work (1:6).	150 400	Sq.m. Cu.m.	748.86 6418.80	112329.00 2567520.00
12.	M.S.Reinforcement (Fe- 500) including cutting, strengthening, bending & binding complete.	30	MT	80235.00	2407050.00
13.	Sand filling in foundation trenches as per specification.	50	Cu.m.	267.45	13372.50
14.	Cement Plaster to Walls: a) 6 mm.thick Plaster(1:3) b) 12 mm.thick Plaster(1:4) c) 19 mm.thick Plaster(1:6)	500 1500 400	Sq.m. Sq.m. Sq.m.	85.58 171.17 213.96	42790.00 256755.00 85584.00
15.	<u>Flooring :</u> a) Vitrified tile of approved make & brand in flooring, skirting as per manufacturer specification complete. b) 18 mm.th. Marble stone (White/Black/Pink) flooring of approved quality. c) 25 mm.th.Cota stone (Black/Grey) flooring of approved quality.	250 150 50	Sq.m. Sq.m. Sq.m.	1283.76 1925.64 748.86	320940.00 288846.00 37443.00
16.	<u>Painting:</u> a) POP of average thickness 2-3 mm. with one coat primer on inside surfaces complete as per specification. b) Acrylic emulsion paint with 2 or more coats on interior surfaces. c) Weather shield paint 2 or more coats on exterior surfaces.	2000 2000 600	Sq.m. Sq.m. Sq.m.	42.79 64.19 85.58	85580.00 128380.00 51348.00
17.	Aluminum framed 2-3 track sliding glass windows of approved make & brand complete and as per specification.	50	Sq.m.	4279.20	213960.00
18.	M.S.Grill in windows, Stair railing, collapsible gate for main entry complete as per specification.	1000	Kg.	85.58	85580.00

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
19.	Doors: a) 30 mm. thick Wooden flush door (one side Veneer and another side lamination finished) including 125X75 mm. size wooden door frame with necessary hardware complete. b) PVC Door frame with shutter with necessary hardware complete & as per specification.	35 15	Nos. Nos.	4814.10 2674.50	168493.50 40117.50
Total of Schedule-"A" (Rs.)					1,20,34,061.55

Plumbing & Sanitary Works (Schedule-B):

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
21.	Providing, Laying and jointing glazed stone ware pipe grade 'A' as per IS: 651 including bends etc.with stiff mixture of CM (1:1) complete. For 400 diameter.	20	Meter	1257.02	25140.40
22.	Providing, Laying cement concrete 1:5:10 up to haunches of S.W.pipes including bed concrete as per standard design. Complete. For 400 diameter.	20	Meter	627.97	12559.40
23.	Providing and fixing square-mouth S.W.Gully trap grade 'A' completewith C.I grating, brick masonry chamber with 300X 300 mm.size C.I cover Wt of cover not less than 4.50 kg.& frame not less than 2.70 kg.as per standard design. 180X150 mm.size 'P' type.	4	Each	2219.84	8879.36
24.	Constructing brick masonry manhole in cement mortar 1:4, foundation concrete 1:4:8 mix inside plastering 12 mm.th.with cement mortar 1:3 finished with floating coat of neat cement and making channels in cement concrete 1:2:4 finished with a floating coat of neat cement complete with inside size 120X90 cm and 90 cm.deep including C.I.Cover with frame (medium duty) 500 mm.internal diameter, total wt.of cover and frame to be not less than 116 kg with F.P.S bricks.Complete.	2	Each	15342	30684.00

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
25.	Providing and fixing Polyethylene-Aluminum-Polyethylene to IS – 15450, U. V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C, including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc., with direction of the engineer in charge. 1620 (20mm OD) pipe	25	Meter	263.04	6576.00
26.	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including fixing the pipe with clamps at 1.00m step CPVC solvent cement and the cost of cutting joints complete as per direction of Concealed work including cutting chases and making good the wall etc. 25mm nominal outer dia Pipes	15	Meter	219.45	3291.75
27.	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) PIPES, Having Thermal Stability For Hot & Cold water supply including all CPVC plain & brass threaded fittings. The includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge 15mm nominal inner dia pipes.	10	Meter	275.47	2754.70
28.	Providing and fixing C P brass bib cock of approved quality conforming to IS:8931 15mm nominal bore.	8	Each	495.30	3962.40
29.	Providing and fixing C P brass stop cock (concealed of standard design and of approved make conforming to IS: 8931) 15mm nominal bore.	10	Each	668.51	6685.10
30.	Providing and fixing water closet squatting pan (Indian type WC pan) with 100mm sand cast iron P or S tap, 10 liter low white PVC. Flushing cistern with manually controlled device (hand level) conforming to IS: 7231 Parry ware/Hind ware with all fittings and fixtures complete including cutting and making good the walls and floors wherever required. White Vitreous China Orissa pattern W C pan of size 580 X 440mm with integral type foot rest.	2	Each	3528.09	7056.18

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
31.	Providing and fixing wash basin with C I brackets, 15mm CP brass pillar taps, 32mm CP brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require: white Vitreous China wash basin size 630X 450mm with a pair of 15mm CP brass pillartaps.	6	Each	2349.71	14098.26
32.	Providing and fixing stainless steel AISI 304 (18/8) Kitchen sink as per IS: 13983 with CI brackets and stainless steel plug 40mm, including painting of fittings and brackets, cutting and making goods the walls wherever required: Kitchen sink with drain board size 510 X 1040mm bowl depth225mm	2	Each	7536.90	15073.80
33.	Providing and fixing PVC waste pipe for sink or wash basin including PVC waste fittings complete. Flexible pipe 40mm dia.	6	Each	80.93	485.58
34.	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic molded frame of approved make and shade with 6mm thick hard board backing: Rectangle shape 453 X357mm	4	Each	756.67	3026.68
35.	Providing and fixing 600 X 120 X 5mm glass shelf with edges round off, supported on anodized aluminum angle frame with CP brass brackets and guard railcomplete	4	Each	564.23	2256.92
36.	Providing and fixing soil, waste and vent pipes: Centrifugally cast (spun) iron socket & spigot (S & S) pipe as per IS: 3989	25	Meter	1029.18	25729.50
37.	Providing and filling the joints with spun yarn, cement slurry and cement mortar 1:2 (1 cement: 2 fine sand) in S.C.I/C.I pipes: 100mm dia pipe.	10	Each	75.74	757.40
38.	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete. Sand cast iron S & S as per IS: 1729	6	Each	672.67	4036.02
39.	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost cutting and making good the walls and floors: Sand cast iron S & S as per IS:1729	8	Each	1013.56	8108.48
Total of Schedule-"B" (Rs.)					1,81,161.94

ELECTRICAL WORKS (SCHEDULE-C):

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
1.	Wiring for light point/fan point/exhaust fan point/call bell point with 1.5 Sqmm FR PVC insulated copper conductor single core cable in surface/recessed medium class PVC conduit, with piano type switch, phenol laminated sheet, suitable size M S box and earthing the point with 1.5sqmm. FR PVC insulated copper conductor single core etc. asrequired.	100	Nos.	736.90	73690.00
2.	Supplying and fixing mounting rail/ box type fluorescent fittings of all types, complete with all accessories etc. and lamp, directly on ceiling/wall, including connection with 1.5sqmm FR PVC insulated copper conduction single core cable and earthing etc. asrequired.	40	Nos.	525.27	21010.80
3.	Supplying and fixing of following types lamp in existing electrical fitting fixtures etc. as required. 18 watt CFL Lamp.	60	Nos.	185.08	11104.80
4.	Wiring for twin control light point with 1.5 Sq.mm FR PVC insulated copper conductor single core cable in surface/recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI. Box and earthing the point with 1.5 Sq. mm FR PVC insulated copper conductor single core cable etc as required.	8	Point	844.95	6759.60
5.	Wiring for light/power plug with 2X4 Sq.mm FR PVC insulated copper conductor single core cable in surface/recessed medium class PVC conduit along with 1 No. 4 sq.mm FR PVC insulated copper conductor single core cable for loop earthing as required.	200	Meter	184.77	36954.00
6.	Wiring for circuit/sub main wiring along with earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. 2X4 Sq.mm + 1X4 Sq.mm earth wire.	200	Meter	184.77	36954.00
7.	Supply and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. Telephone socket outlet	11	Each	99.41	1093.51

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
8.	Supply and fixing metal box of 150mm X 75mm X 60mm deep (nominal size) on surface on in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 3 pin 5/6 amps socket outlet and 5/6 amps piano type switch, connection, painting etc. as required (for light plugs to be used in non residential buildings)	50	Nos.	195.57	9778.50
9.	Supplying and fixing metal box of 180mm X 100mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 6 pin 5/6 & 15/16 amps socket outlet and 15/16 amps piano type switch, connection, painting etc as required.	40	Nos.	269.80	10792.00
10.	Supplying and fixing following way prewired vertical type TP&N MCB distribution board of steel sheet for 415 Volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size of FR PVC insulated copper conductor for upto the terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc as required (but without MCB/RCCB/Isolator) 6 way (4+18), Single door.	4	Each	8521.89	34087.56
11.	Supplying, installing, testing and commissioning of following capacity TNP lap off box made of 1.6mm thick sheet steel enclosure duly painted with powder coating on existing rising mains complete with PPN disconnect or FSU AND HRC fuses, connection, earthing etc as required. 32amps TPN	4	Each	6404.11	25616.44
12.	Earthing with copper earth plate 600mm X 600mm X 3mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc with charcoal/coke and salt as required	1	Nos.	9658.57	9658.57
13.	Providing and fixing copper tape 20mm X 3mm thick on parapet or surface or wall for lighting conductor complete as required (for horizontal run)	50	Meter	384.66	19233.00
14.	Providing and fixing copper tape 20mm X 3mm thick on parapet or surface or wall for lighting conductor complete as required (for vertical run)	60	Meter	414.91	24894.60

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
15.	Laying of one number PVC insulated and PVC sheathed/XLPE power cable of 1.1KV grade of following size direct in ground including excavation, sand cushioning, protective coving and refilling the trench etc asrequired Upto 35 Sq.mm	200	Meter	195.57	39114.00
16.	6 amps to 32 amps. Ratings, DP MCB, "C" Curve, 10KV breaking capacity.	4	Each	355.33	1421.32
17.	6 amps to 32 amps. Ratings, TPN MCB, "C" Curve, 10KV breaking capacity.	4	Each	701.48	2805.92
19.	Brass compression gland for (32mm) 3.5 X 25 Sq.mm 1.1 KV grade cable.	1	Set	128.07	128.07
20.	Straight through cable jointing kit with cast resin compound with ferrules for 3.5 X 25 Sq.mm 1.1KV grade cable.	1	Set	1040.36	1040.36
Total of Schedule-"C" (Rs.)					3,66,137.04

SCHEDULE-"D": Electrical Fixtures.

Sl. No.	Description of work	Quantity	Unit	Rate (Rs.)	Amount (Rs.)
1.	Supply of 63Amp TPN Main Switch Havel or similar	1	No.	8946.73	8946.73
2.	Supply of 8 way distribution board (MCB DB) of approved make, (metal) type, with the following MCBs as mentioned below: a) 63 Amp. 4 pole incomer – 1No. b) 32 Amp. SP MCB – 3Nos. c) 20 A MCB – 2Nos. d) 10 A SP MCB – 6Nos. e) 6 A SP MCB - 6Nos.	1	No.	11330.87	11330.87
3.	20 mm Dia PVC Conduit : Supply of 20 mm dia rigid PVC conduit with 2 mm wall thickness along with all accessories such as bends/ junction boxes/ elbows etc. and laying the same as recessed conduit system in wall/ column / ceiling as the case may be by chipping the wall, providing suitable joint solutions.	300	Rm.	9.02	2706.00

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
4.	25 mm Dia PVC Conduit : Supply of 25 mm dia rigid PVC conduit with 2 mm wall thickness along with all accessories such as bends/ junction boxes/ elbows etc., and laying the same as recessed conduit system in wall/ 1 column/ ceiling as the case may be by chipping the wall, providing suitable joint solutions, staples, saddles, hooks,screws.	300	Rm.	13.52	4056.00
5.	20 mm dia PVC Flexible : Supplying and fixing of 20 mm dia PVC flexible conduit pipes (steel wire reinforced) inside workstation partitions or above false ceiling for lighting etc. complete.	150	Mtr.	48.47	7270.50
6.	1.5 Sq. mm. Wire : Supplying and wiring with 1.5 sq.mm size: 1100V grade PVC insulated multi-strand, copper wire as directed.	500	Rm.	25.93	12965.00
7.	2.5 Sq. mm. Wire : Supplying and wiring with 2 x 2.5 sq.mm size and 1 x 1.5 sq.mm. : 1100V grade PVC insulated, multi-strand, copper wire complete.	400	Rm.	95.81	38324.00
8.	4.0 sq.mm Wire : Supplying and wiring with 2 x 4.0 sq.mm and 1 x 2.5 Sq. mm. size: 1100V grade PVC insulated, multi-strand, copper wire complete.	100	Rm.	138.66	13866.00
9.	6.0 sq. mm Wire : Supplying and wiring with 2 x 6.0 sq.mm and 1 x 2.5 size : 1100V grade PVC insulated, multi-strand, copper wire complete.	130	Rm.	163.47	21251.10
10.	Switch 6A : Supplying of 6A or 10A, 240V, single pole (SP) switch modular type along with suitable modular switch plate & cover plate and fixing of the same to the already fixed modular.	100	Each	92.44	9244.00
11.	Switch 16A : Supplying of 16A or 20A, 240V, single pole (SP) switch modular type along with suitable modular switch plate & cover plate and fixing of the same to the already fixed modular switch box, making electrical connections, ear thing etc. asrequired.	50	Each	146.55	7327.50
12.	3 Pin 6A Socket : Supplying of 3 pin, 6A or 10A, 240V, flush type socket modular type along with suitable modular switch plate & cover plate and fixing of the same to the already fixed modular switch box, making electrical connections, ear thing etc. asrequired.	75	Each	135.28	10146.00

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
13.	3 Pin 16A Socket : Supplying of 3 pin, 16A or 20A, 240V, flush type socket modular type along with suitable modular switch plate & cover plate and fixing of the same to the already fixed modular switch box, making electrical connections, ear thing etc. asrequired.	60	Each	198.41	11904.60
14.	Switch Box : Supplying of approved make modular switch boxes of required sizes made up of 1.6 mm sheet steel along with accessories and fixing of the same as flush with wall/ column work stations including required civil work etc.	15	Sq.ft.	216.44	3246.60
15.	Mirror Optics Fittings : Supplying of recess mounting type Mirror optic compact florescent luminaries with electronic ballasts, lamps & 1 accessories suitable for 2 x 36 watts compact florescent lamps 600 x 600 fitting and fixing of the same as flush with false ceiling by providing required anchor bolts-nuts ;6 mm down rods with thread making electrical connections, earthing etc. asrequired.	20	Each	5120.20	102404.00
16.	Box Type Fittings : Supplying of Box type fluorescent luminaries with ballast, lamp & accessories suitable for 2 x 18 watts fluorescent lamps and fixing of the same on to the False ceiling by providing 6 mm dia anchor bolt-nuts, making electrical connections, ear thing etc. asrequired.	50	Each	672.99	33649.50
17.	Box Type 1 x 18 Fittings : Supplying of Box type fluorescent luminaries with ballast, lamp & accessories suitable for 1 x 18 watts fluorescent lamps and fixing of the same on to the RCC / False ceiling by providing 6 mm dia anchor bolt-nuts, making electrical connections, earthing etc. as required.	60	Each	767.70	46062.00
18.	WCFL Fittings : Supplying of down lighter recess mounting horizontal lamp with all accessories, louvers & lamp suitable for 1 x 18 W CFL and fixing of the same as flush in false ceiling with suitable clamps/ screws, making electrical connections, earthing etc. as directed.	50	Each	1408.00	70400

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
19.	Exhaust Fan : Supplying of 300 mm sweep, continuous/heavy duty, single phase, exhaust fan with louvers and all accessories & installation of the same by providing suitable bolt & nuts screws, making wall opening and making good the damages, making electrical connections, earthing, testing etc. as required. The electrical connections shall be made by providing suitable size PVC insulated flexible copper cable from already provided ceiling rose as required.	4	Each	3307.29	13229.16
20.	Plug & Socket : Supplying of 32A metal clad plug & socket (3 pole & earth) with 32A TP MCS (10KA) along with sheet steel box and fixing of the same on the wall or flush with wall as required coupling of the conduits, making electrical connections, earthing etc. as directed.	50	Each	1178.02	58901.00
21.	Plug & Socket (2 – Pole) : Supplying of 20A metal clad plug & socket (2 pole & earth) with 25A SP MCB along with sheet steel box and fixing of the same on the wall or flush with wall as required coupling of the conduits, making electrical connections, earthing etc. as directed.	50	Each	703.44	35172.00
Schedule 'D'-Total (Rs.)					5,22,402.56

FIRE FIGHTING WORKS (SCHEDULE –E) :

Sl. no.	Description of work	Unit	Qty.	Rate	Amount
1.	A fire Hydrant, Wet Riser & Sprinkler System: Supply, Installation, Testing, commissioning of MS Black steel pipe heavy class C conforming to IS: 1239/3589 including all fittings viz, elbows, tees, flanges, etc. including painting the pipe with one coat of approved red oxide primer and two coats of approved red enamel paint and welded joints complete with cutting making good the walls, floors or any other surface with all contractor's material, labor, lead, lift, taxes etc complete.				
	a) 200mm dia (6.35mm thick)	Meter	10	2761.08	27610.80

Sl. no.	Description of work	Unit	Qty.	Rate	Amount
	b) 150mm dia	Meter	20	1985.74	39714.80
	c) 100mm dia	Meter	5	1422.37	7111.85
	d) 80mm dia	Meter	15	1227.15	18407.25
	e) 65mm dia	Meter	5	1004.03	5020.15
	f) 50mmdia	Meter	20	808.80	16176.00
	g) 40mm dia	Meter	5	580.11	2900.55
	h) 32mm dia	Meter	10	440.66	4406.60
2.	Supply, Installation, Testing, commissioning of swinging type CI Non return Valve with flap and SS hinges complete including matching flanges, outs & bolts conforming to IS 5312 with all contractor's material, labor, lead, lift, taxes etc complete.				
	a) 200mm dia	Nos.	2	17849.40	35698.80
	b) 150mm dia	Nos.	2	16064.46	32128.92
	c) 80mm dia	Nos.	1	5354.82	5354.82
	d) 50mm dia	Nos.	2	3318.87	6637.74
3.	Supply, Installation, Testing, Commissioning of CI butterfly valve (wafer type) with counter flange & nut bolts with all contractor's material, labor, lead, lift, taxes etc, complete.				
	a) 200mm dia	Nos.	1	14368.76	14368.76
	b) 150mm dia	Nos.	2	11713.67	23427.34
	c) m80mm dia	Nos.	2	5856.83	11713.66
	d) 50mm dia	Nos.	1	5265.58	5265.58
	e) 40mm dia	Nos.	5	3480.64	17403.20
4	Supply, Installation, Testing, commissioning of CIDF Sluice valve with counter flange & nut bolt with all contractor's material, labour, lead, lift, taxes etc. complete				
	a) 200mm dia	Nos.	2	16064.46	32128.92

Sl. no.	Description of work	Unit	Qty.	Rate	Amount
5.	Supply, Installation, Testing, Commissioning of Suction Strainer with foot valve with all contractor's material, labour, lead, lift, taxes etc. complete				
	a) 200mm dia	Nos.	1	21196.16	21196.16
	b) 80mm dia	Nos.	1	6916.64	6916.64
6.	Supply, Installation, Testing, Commissioning of SS oblique type hydrant valve with 63mm outlet SS instantaneous female coupling with rubber cap and chain conforming to IS: 5290 including matching flange, gasket, nuts and bolts with all contractor's material, labour, lead, lift, taxes etc. complete.	Nos.			
	a) Single headed	Nos.	5	5801.05	29005.25
7.	Supply, Installation, Testing, commissioning of 63mm dia rubberized reinforced rubber line hose pipe in 15m length conforming to IS: 636 type A ISI marked with stainless steel male and female instantaneous coupling conforming to IS 903 wound with 18 SWG copper wire with all contractor's material, labour, lead, lift, taxes etc. complete.	Nos.	5	5577.94	27889.70
8 .	Supply, Installation, Testing, Commissioning of Stainless steel branch pipe with 20mm nozzle conforming to IS 903 with all contractor's material, labour, lead, lift, taxes etc. complete.	Nos.	5	1784.94	8924.70
9.	Supply, Installation, Testing, Commissioning of swinging type hose reel drum fabricated from 14 SWG CRCA sheets painted with red color stove paint 2 coats over 1 coat of primer with 30m long 20mm dia rubber hose pipe with 10kg/sqcm working pressure with GM self closing shut – off nozzle of 5mm outlet fixed on wall with dash fasteners with all contractor's material, labour, lead, lift, taxes etc.complete.	Nos.	5	6693.52	33467.60
10.	Supply, Installation, Testing, Commissioning of M.S. (16 swg) hose box with lockable arrangements to accommodate 2 RRL hose of 15m length and one branch pipe painted white inside and red outside with one key with all contractor's material, labour, lead, lift, taxes etc. complete.	Nos.	5	4350.79	21753.95
11.	Supply, Installation, Testing, Commissioning of 150mm dia dial type pressure gauge complete with pipe stem and cock with all contractor's material, labour, lead, lift, taxes etc. complete				
	a) Electric motor Driven fire pump. Capacity of pump= 2850 LPM & Head = 90 Meters	Set	-	312364.48	312364.48

Sl. no.	Description of work	Unit	Qty.	Rate	Amount
	b) Diesel Engine driven standby fire pump Capacity of pump= 2850 LPM & Head = 90 Meters	Set	-	702820.09	702820.09
	c) Electric Motor Driven Jockey pump Capacity pump = 180 LPM& Head = 90 Meters	Set	-	78091.12	78091.12
12.	Supply, Installation, Testing, Commissioning of INDFOSS make pressure switches for cut – out and cut in pressure with cock with all contractor's material, labor, lead, lift, taxes etc. complete.	Nos.	2	3904.56	7809.12
13.	Supply, Installation, Testing, Commissioning of Installation control valve along with trim actuator, water motor gong, instruments & other accessories as required with all contractor's material, labor, lead, lift, taxes etc complete.				
	a) 150mm dia	Sets	1	50201.43	50201.43
14.	Supply, Installation, Testing, Commissioning of quatroid bulb sprinkler 68 C along with necessary attachment with all contractor's material, labor, lead, lift, taxes etc complete.				
	a) Pendant type	Nos.	10	379.30	3793.00
	b) Sidewall type	Nos.	5	546.64	2733.20
15.	Supply, Installation, Testing, Commissioning of G.I medium grade pipe IS-1239 part – I, with all fittings support sand				
	a) 40mm dia	Mtr.	10	753.02	7530.20
16.	Supply, Installation, Testing, Commissioning of carbon – di- oxide fire extinguisher consisting of welded MS cylindrical body, squeeze, lever discharged valve, fitted with internal discharged nozzle, suspension bracket, finished externally with red enamel paint and fixed to wall with brackets with rawl plug/ dash fasteners complete, labor, lead, lift, taxes etc.complete				
	a) Capacity 4.5kg. ISI marked	Nos.	6	6916.64	41499.84
17.	Supply, Installation, Testing, commissioning of mechanical foam type (ISI marked) fire extinguisher consisting of welded MS cylindrical body, squeeze, lever discharge valve, high pressure discharge hose, discharged valve, high pressure dischargehose.				
	a) 9 liters capacity	Nos.	4	1840.72	7362.88

Sl. no.	Description of work	Unit	Qty.	Rate	Amount
18.	Supply, Installation, Testing, commissioning of heavy duty PVC insulated, PVC armoured aluminum conductor cables 1100 V grade including necessary support clamps and connection lugs complete in all respect with all contractor's material, labour, lead, lift, taxes etc. complete.				
	a) Power cable 3 core X 90 mm ²	Meter	10	529.90	5299.00
	b) Power cable 3 core X 10 mm ²	Meter	5	133.87	669.35
	c) Control cable copper armoured, 2 Core X 2.5 mm ²	Meter	10	167.34	1673.40
19.	Supply, Installation, Testing, commissioning of GI earthing strip 25 mm X 6 mm thk. from all motors and MMM panel to be connected in all approved manner to general earthing system with all contractor's material, labour, lead, lift, taxes etc. complete	Job	1	11155.87	11155.87
20.	Supply, Installation, Testing, commissioning of Gunmetal collecting head with 63 mm dia instantaneous type inlet 150 mm flanged, outlet with built in check valve for fire brigade connection to fire riser (IS 904) with all contractor's material, labour, lead, lift, taxes etc. complete.				
	a) Three ways.	Nos.	2	6693.52	13387.04
Total of Schedule-"E" (Rs.)					17,01,019.76

OHE Electric Light Mast & Tower at Roof top for last mile connectivity (SCHEDULE -F):

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
1.	Supply and installation of 20 Meter High Mast (Shaft in two sections suitable for 44m/sec wind speed) with LED lights for RailTel campus at Karbighaia, Patna with 6 mm. dia S.S wire rope, 12 meter high Output latest bright LED Luminaries of 200W (up to 350W available) of make CREE/Lumileds or equivalent including 1 year end to end maintenance with necessary earthing foundation mounting clamps, Bolts, Washers, anchor plate of resistant steel etc. with all contractor's labour & materials, taxes & duties, lead & lift scaffolding etc. complete in all respects.	1	Set	1073116.38	1073116.38
Total of Schedule-"F" (Rs.):					10,73,116.38
Total of Schedule (A+B+C+D+E+F) =Rs.					1,58,77,899.23

Project Management Consultancy & work Charge (Schedule –G):

Sl. no.	Description of work	Quantity	Unit	Rate	Amount
1.	Project management Consultancy Charge, which includes Final report, structural stability certificate from JU/IIT or from similar institution, making structural drawing fit for construction for all floors, plan, sections & elevation, piles with lay out plan & cap details with all other structural lay out plan, column schedule including soil test, Design Report based on Test Pile & Load Test etccomplete.	1	No	12,70,231.94	1270231.94
Grand Total of Schedule (A+B+C+D+E+F+G) = (Including Tax Components)				Rs. 1,71,48,131.17	
Rate quoted in percentage above/at Par/below in figures:					
Rate quoted in percentage above/at Par/below in words:					

We confirm that we have read and understood the requirement stated in the scope of work and all the terms and conditions governing the tender as has been specified in the tender document. We have gone through the Liquidated damage clause and agree to the same. We further confirm that we have made ourselves conversant with the site conditions and we shall be able to execute the work within the time specified in the tender document.

(Name, Signature & Seal of the Tenderer)