

National High Speed Rail Corporation
Limited (NHSRCL)
(A Joint Sector Company of Govt. of India and
Participating State Government)



**“Tender for Miscellaneous Electrical & telecom works from
NHSRCL Chainage 508.00 to 416.00 including HSR depot in
connection with NHSRCL work.”**

Tender No.: NHSRCL(ADI)/MA/EL02/USML/86.1

TWO PACKET BID DOCUMENT

BID DOCUMENT CONSIST OF :

- NOTICE INVITING Tender (NIT)
- INSTRUCTION TO BIDDERS (ITT)
- SPECIAL CONDITIONS OF CONTRACT (SCC)
- FORM OF BID
- SPECIFICATION FOR ELECTRICAL WORKS
- BILL OF QUANTITY (BOQ)

National High Speed Rail Corporation Limited
3rd Floor, Riverfront House, Between Nehru and Gandhi Bridge
Usmanpura, Ahmedabad – 380009

Seal & Signature of Tenderer

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CPM SYSTEM
NHSRCL-AHMEDABAD

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TOP SHEET

No.: NHSRCL(ADI)/MA/EL02/USML/86.1

Name of Work : "Miscellaneous Electrical & telecom works from NHSRCL Chainage 508.00 to 416.00 including HSR depot in connection with NHSRCL work."

Estimated Cost : **Rs. 1,44,05,377/- (Rs. One crore forty four thousand five hundred three hundred seventy seven only) including GST**

Cost of Tender Document : **Rs. 5900/- Five thousand nine hundred only) including GST @18%**

Earnest Money : **Rs. 2,22,030/- (Two lakh Twenty two thousand thirty only)**

Completion Period : **Twelve Months**

Last Date of Submission : **11.06.2019 at 15.00 hrs.**

Date of opening Bid : **11.06.2019 at 15.30 hrs.**

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Tender No:- NHSRCL(ADI)/MA/EL02/USML/86.1

Dt. 17.05.2019

NOTICE INVITING TENDER

1.0 Chief Project Manager (Systems), National High Speed Rail Corporation Limited, 3rd Floor, Riverfront House, Between Gandhi & Nehru Bridge, Riverfront (west), Ahmedabad-380009 invites sealed tender in prescribed forms for the under mentioned work.

- | | | |
|----|---|---|
| a) | Name of work | “Miscellaneous Electrical & telecom works from NHSRCL Chainage 508.00 to 416.00 including HSR depot in connection with NHSRCL work.” |
| b) | Estimated Cost | Rs. 1,44,05,377/- (Rs. One crore forty four thousand five hundred three hundred seventy seven only) including GST |
| c) | Earnest Money Deposit | Rs. 2,22,030/- (Two lakh Twenty two thousand thirty only) |
| d) | Tender Fee | Rs. 5,900/- (including of 18% GST) |
| e) | Completion period | Twelve months |
| f) | Validity of offer | 90 Days |
| g) | Type of tender | Open tender |
| i) | Tender closing date | 11.06.2019 at 15.00 hrs. |
| j) | Tender opening date | 11.06.2019 at 15.30 hrs. |
| k) | Place of submission and opening of tender | Office of Chief Project Manager(System),
3rd Floor, Riverfront House,
Between Gandhi & Nehru Bridge,
Riverfront (west), Ahmedabad-380009 |

Information for Tenderers-

1. The cost of Tender Document is **Rs 5,900/-** including GST@18%. The cost of tender document should be submitted along with tender form in the form of Pay Order/Demand Draft of any scheduled bank of India payable in favor of M/s National High Speed Rail Corporation Limited payable at New Delhi. GSTIN certificate shall be attached by the tenderer. Tender Document can be obtained from the office of Chief Project Manager (Systems) between 10:30 hrs.to 16:00 hrs. on all working days from 17.05.2019 to 10.06.2019 and from 10:30 hrs. to 15:00 hrs on 11.06.2019.

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2.1 Address for tender documents collection and submission-

Office of Chief Project Manager (Systems), 3rd Floor, Riverfront House, Between Gandhi & Nehru Bridge, Riverfront (West), Ahmedabad-380009.

Tender document can be downloaded from www.nhsrcl.in

2.2 Submission on Tender Documents & Opening – The tender will be received in the office as per para 2.1 above at a time and date as provided earlier in this NIT and the Technical Bids will also be opened accordingly in this office. Financial bids of the eligible tenderer/s would be opened subsequently on the date & time, to be notified later on.

The offer is to be submitted in two sealed envelopes with one envelope containing the technical Bid duly super-scribed thereon as “Technical Bid (Packet-I)”, Name of work, Tender No. and date of opening and the other envelope containing the Financial Bid duly super scribed thereon as “Financial Bid (Packet-II)”, Name of work and Tender No. Packet-I shall contain the EMD, cost of tender form and the “Technical bid” along with requisite documents/credentials. Packet-II shall contain the “Financial Bid” only.

Both the envelopes should again be sealed in another large envelope duly super scribed with “Name of work, Tender No. and Date of Opening” and same shall be deposited in the Tender Box allotted for the purpose in the office of the Chief Project Manager (Systems), as per address given in para 2.1 above. Tender duly sealed in the prescribed manner can also be sent through registered post so as to reach this office not later than the date and time specified above.

Any tender received later than the prescribed date and time at NHSRCL’s office at Ahmedabad shall be rejected/ unaccepted and returned to the bidder unopened.

2.3 Earnest Money Deposit of Rs. **Rs. 2,22,030/-** be submitted in the form of Pay Order/Demand Draft of any scheduled bank of India payable in favor of M/s National High Speed Rail Corporation Limited payable at New Delhi. Tender received without suitable Earnest Money Deposit shall be considered as un-responsive and summarily rejected.

3. Tender shall be submitted in accordance with the terms of the “Instruction to Tenderers” in the attachment hereto, which forms part of this Notice Inviting Tender.
4. Interested eligible bidders are invited to attend a Pre-Bid meeting to be held on 03/06/2019 date at the office address as per address given in para 2.1 above at 11:00 hrs. Participation in this Pre-Bid meeting is not mandatory.
5. National High Speed Rail Corporation Limited reserves the right to cancel the tender before submission/opening of tender, postpone the tender submission/opening date and to accept /reject any or all tenders without assigning any reasons thereof.
6. Tenderer may note that they are liable to be disqualified at any time during the tendering process in case any of the information furnished by them is not found to be true. The decision of NHSRCL in this regard shall be final and binding.
7. The validity of the offer shall be 90 days from the date of opening of the tender.

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All Bidders are hereby cautioned that Bids containing any material deviation from the Bid document which consists of NIT, Instructions to Tenderer, Special conditions of contract, Specifications for Electrical Works, Bill of Quantities, is liable to be summarily rejected as non-responsive.

8. Minimum Eligibility Criteria :

(a) Firm shall INITIALLY be filtered on the basis of following criteria

INITIAL REQUIREMENTS:-

S. No.	Criteria
1	Firm should not have abandoned any work in last five years.
2	Bidder's Contract with any organization should not ever been terminated due to poor performance.
3	Bidder should not have been involved in frequent litigation in last five years.
4	Bidder should not have suffered Bankruptcy/ insolvency in last five years.
5	Bidder should not have been blacklisted by any organization.
6	Bidder should not submitted any misleading information in the application.
7	Bidder should be financially sound to perform the work.
8	Bidder's Net Worth should not be negative.

To prove conformity to above requirements, bidder should submit an undertaking for the fulfilment of all above criteria on the letter head of the firm at the time of submission of bid. At any stage if it found that bidder has not met any of the above eligibility criteria, his bid will be summarily rejected and action shall be taken as per terms and conditions of this bid documents.

9. for Tenders Costing Above Rs. 50 Lakhs is as under:

1. Should have successfully completed any of the following during last 07 (seven) years, ending last day of month previous to the one in which tender is invited.	<p>Three similar works costing not less than the amount equal to 40% (i.e Rs.57,62,151/-) of advertised value of the tender,</p> <p style="text-align: center;">or</p> <p>Two similar works costing not less than the amount equal to 50%(i.e Rs. 72,02689/-) of advertised value of the tender,</p> <p style="text-align: center;">or</p> <p>One similar work costing not less than the amount equal to 80%(i.e. Rs. 1,15,24,302/-) of advertised value of the tender.</p> <p>Details to be submitted in the format given in Annexure D. Note: Work completion certificate shall be submitted by the bidder clearly mentioning the amount of work executed and time. Any discrepancy in work completion certificate if noticed,</p>
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	the offer shall be summarily rejected without obtaining any clarification.
2. Total contract amount received during the last three financial year and in current financial year.	Should be a minimum of 150% of advertised tender value of work (i.e. Rs. 2,16,08,066/- in support of which attested certificate from Employer/ Client or audited Balance Sheet duly certified by Chartered Accountant should be submitted by the tenderer. Details to be submitted in the format given in Annexure E. Note : Any discrepancy in document in support of contract amount received during last three financial year and current financial year if noticed, the offer shall be summarily rejected without obtaining any clarification.

If the tenderer does not submit any proof for meeting with the eligibility criteria as given above and Tender Conditions, along with the offer, the same will be considered incomplete and will be summarily rejected.

2. **Definition of similar work** :- Execution of Electrical work in any Govt. Department/Railway/PSU's/ Govt. Bodies, the Experience certificates/work completed certificates should be issued by an officer not below the rank of Executive Engineer (of Govt./PSU's/Railways/Govt. Bodies of related work) are required with the Bid.

Work of Similar Nature would mean –

- (i) The total value of similar nature of work completed during the qualifying period and not the payment received within the qualifying period alone should be considered.
- (ii) In case, the final bill of similar nature of work has not been passed and final measurements have not been recorded, the paid amount including statutory deduction is to be considered. If final measurements have been recorded and work has been completed with negative variation, then also paid amount including statutory deduction is to be considered.
- (iii) However, if final measurements have been recorded and work has been completed with positive variation but variation has not been sanctioned, the original agreement value or sanctioned agreement value, whichever is lower should be considered for judging eligibility.

**Chief Project Manager (Systems)
National High Speed Rail Corporation Limited**

Seal & Signature of Tenderer

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FORM OF BID

To,

Chief Project Manager(Systems),
National High Speed Rail corporation limited
3rd Floor, Riverfront House,
Between Gandhi & Nehru Bridge,
Riverfront (west),Ahmedabad-380009

Dear Sir,

I/We,

_____ (Name and address of the Tenderer) have read the various terms and conditions of the tender documents attached herewith duly signed by me/us and agree to abide by the same. I/We also agree to keep this tender open for acceptance for a period of 90 days from the date fixed for opening the same.

I/We have quoted our rates in the Bill of Quantities taking into account all the above factors and we offer to do the work "Miscellaneous Electrical & telecom works from NHSRCL Chainage 508.00 to 416.00 including HSR depot in connection with NHSRCL work" quoted in the attached Bill of Quantities and hereby bind ourselves to complete the work in all respects within time schedule depicted in tender documents from the date of issue of letter of acceptance of tender.

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

Thanking you,

Yours faithfully,

Signature _____ in capacity of _____

_____ duly authorised to sign bids for and on behalf of:

(In Block capital letters)

Date this _____ day of _____ 2018

Seal & Signature of Tenderer

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Instructions to Tenderers (ITT)

A.	INTRODUCTION
1.0	<u>General</u>
1.1	Name of the Work: "Miscellaneous Electrical & telecom works from NHSRCL Chainage 508.00 to 416.00 including HSR depot in connection with NHSRCL work."
1.2	<p>The bidder should accompany the following documents duly sealed in the tender envelope:</p> <p>Technical Bid (Packet-1)</p> <p>i) The offer is to be submitted in two sealed envelopes with one envelope containing the Technical Bid duly super-scribed thereon as "Technical Bid (Packet-1)", Name of work, Tender No. and date of opening and the other envelope containing the Financial Bid duly super scribed thereon as "Financial Bid (Packet-II)", Name of work and Tender No.</p> <p>ii) Attested copies of Affidavit for sole proprietorship / partnership deed / memorandum and Articles of Association along with details pertaining to place of registration, principal place of business of the firm, etc.</p> <p>iii) Attested copy of power of attorney on non-judicial stamp paper of appropriate value of the signatory of bid on behalf of the tenderer.</p> <p>iv) EMD and tender document fees shall be submitted with technical bid (packet-1). Earnest Money must be submitted as indicated in NIT for the work as specified. Tender received without suitable Earnest Money Deposit shall be considered as un-responsive and summarily rejected.</p> <p>v) Attested copy of Goods and Service Tax Registration (as applicable) & PAN Card.</p> <p>vi) Last three financial year's and current financial year audited Balance Sheet duly certified by Chartered Accountant for eligibility criteria @ 150% of Advertised Cost.</p> <p>vii) Copies of the work completion certificates duly attested from the clients for having completed works of similar nature should be as per enclosed format.</p> <p>viii) The work experience certificate of works executed on Sub-let works shall not be considered.</p> <p style="text-align: center;"><u>Complete documentary evidence should be submitted by bidder.</u></p> <p>Financial Bid(Packet-II)</p> <p>i) The other envelope containing the Financial Bid duly superscribed thereon as "Financial Bid (Packet-II)", Name of work and Tender No.</p> <p>ii) The package shall contain the Bill of quantities with rates duly filled in words and figures. Quoted Rate in terms of Percentage Above / At Par / Percentage below, on cumulative Tender Cost duly signed and Stamped.</p>
1.3	The work is proposed to be executed under the following relationship:
a)	Client / Employer: National High Speed Rail Corporation Ltd.



c)	Contractor: The successful Tenderer to whom the work is awarded by NHSRCL shall become the Contractor who will execute the work.
d)	Engineer in Charge : CPM (System) or his nominated representative.
1.4	Throughout these bidding documents, the terms "bid" and "tender" and their derivatives ("bidder"/ "Tenderer") "bid/tendered", "bidding"/ "tendering" etc are synonymous. Day means calendar day. Singular also means plural.
1.5	Scope of Work : The scope of work includes Supply and Execution of Electrical wiring/cabling/telecom wiring and accessories/ Supply Installation of distribution system / Supply and Laying LT cables and its accessories / Earthing / Cable jointing, telecom items installation etc. as per BOQ.
1.6	NIT Response: The NIT Response must be properly signed as detailed below: By the proprietor in case of a proprietary firm. By the partner holding the power of attorney in the case of a firm in partnership (a certified copy of the power of attorney shall accompany the Tender). By a duly authorized person holding the power of attorney in the case of a limited company or corporation (a certified copy of the power of attorney shall accompany the Tender). By ROC nominated directors of the company in the case of a private limited company.
1.7	Tenderers may carefully note that they are liable to be disqualified at any time during the tendering process in case any of the information furnished by them is found to be inaccurate or untrue .
1.8	A Tenderer shall submit only one bid in the capacity of an Individual or Sole Proprietor, Partnership firm or Company. Violation of this condition is liable to a Tenderer's disqualification.
1.9	Any amendment / Corrigendum will be updated time to time on www.nhsrcl.in it is tenderer's responsibility to keep in touch for any amendment / Corrigendum.
2.0	Rates / Prices/Costs
2.1	The rates shall be offered in the enclosed "Bill of Quantity" (BOQ). The rates shall include cost of all activities, wages, all allowances and benefits, payment towards entitled medical and annual leave, PF & PF contributions, incidental costs, Total Marine Insurance Charges for imported items and Local Insurance Charges, if any(as applicable), Total Inland Charges for Rail and Road Transport (Freight) etc. GST is also included in the schedule.
2.2	The unit rates offered against the various items (Schedule/s) will include the following elements of Cost. (i) Cost of carriage, Loading and Unloading at Site of the work i.e., place of installation and all other incidentals connected there-with. This also include transportation charges from the Railway Stores to the site and collection of balance materials left over after the work, if any, and handling over the Railway Store. (ii) All other miscellaneous expenses necessary for the execution of the work and fulfillment of the contractual obligation. (iii) All rates quoted in the tender shall be deemed to be inclusive of Inspections Charges, Royalty etc. payable by the Contractor to the Government or any public body and normally no additional rate will be paid or claims entertained on this account by the NHSRCL.



	(iv) Tender forms containing over writings, erased rates not shown in words are liable to be rejected. In case of discrepancy in rates as shown in figures and in words, if noticed, the accepting authority may at his discretion accept the lower of the two.
B	BIDDING DOCUMENTS
3.0	Content of bidding documents
3.1	The bidding documents include the following: Notice Inviting Tender (NIT) Instruction to Tenderer(ITT) Form of Bid Special Conditions of Contract Technical Specification Bill of Quantities
3.2	The bidder is expected to examine all instructions, terms, conditions, forms, specifications and any other information in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the bidder's risk and may result in rejection of their bid.
4.0	COST OF BIDDING
4.1	The bidder shall bear all costs associated with the preparation and submission of the bid and the Employer will in no case be responsible or liable for these costs regardless of the conduct or the outcome of the bidding process.
5.0	UNDERSTANDING AND AMENDMENT OF TENDER DOCUMENTS
5.1	The bidder must obtain for itself on its own responsibility and its own cost all the information including risks, contingencies & other circumstances in execution of the work. It shall also carefully read and understand all its obligations & liabilities given in tender documents.
5.2	The bidder is advised to visit and examine the site where the work is to be executed and its surroundings or other areas as deemed fit by the bidder and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and execution of the contract. The cost of visiting the site and collecting relevant data shall be at the bidder's own expenses. It is a condition of the tender that the Tenderer is deemed to have visited the site and satisfied himself with all the conditions prevailing including any difficulties for executing the work.
5.3	At any time prior to the deadline for submission of bids, Employer may for any reason whether at its own initiative or in response to any request by any prospective bidder amend the bidding documents by issuing Corrigendum, which shall be part of the Tender documents.
5.4	Employer may at its discretion extend the deadline for submission of the bids at any time before the time of submission of the bids and the same will be published at NHRCL website www.nhrcl.in .
C	PREPARATION OF BIDS
6.0	Language of Bid
6.1	The bid prepared by the bidder and all documents related to the bid shall be written in English.
7.0	Signing of all Bid Papers and Completing Bill of Quantities



7.1	All the pages of the tender documents, Bill of Quantities and accompanying documents must be properly stamped and signed by the authorized signatory holding the Power of Attorney on each page. (The bidder is to enclose a copy of Power of Attorney). All pages of bid document shall be numbered and a index shall be submitted with the bid document clearly showing the no. of pages submitted with the tender document.
7.2	Bidder shall quote single percentage Above/ below/ at par rate for all the BOQ items. While filling up the rates in the Bill of Quantities, bidder shall ensure that there is no discrepancy in the rates and amounts. In case of any discrepancy, the quoted rate mentioned in percentage above/ below/ at par shall be taken as final and binding.
7.3	The bidder must fill and submit the prices and % rate above or below or at par as per instructions given in Bill of Quantities. He shall not make any addition or alteration.
7.4	Any overwriting, erasures or cancellations shall only be valid, if they are initialed by the signatory (ies) to the bid.
8.0	Deviations
8.1	The bidder should clearly read and understand all the terms and conditions, specifications, corrigendum etc. mentioned in the original tender documents. If the Tenderer has any observations, the same may be indicated in his forwarding letter along with the tender. The Tenderer is advised not to make any corrections, additions or alterations in the original bid documents. If bidder makes any correction in his own entries the same shall be initialed and stamped by him. If this condition is not complied with, bid is liable to be rejected.
D	SUBMISSION OF BIDS:
9.0	Deadline for submission of tender
9.1	The tender duly filled must be received by Employer at address specified not later than the date and time as mentioned in the "Notice Inviting Tender".
9.2	Any tender related documents received later than the deadline prescribed for submission of tender by Employer shall be rejected.
9.3	Tender brought to the office of Employer later than the deadline prescribed but before the opening time mentioned in the bidding document shall be declared as delayed tender and may not be considered by Employer and decided on its merits. The decision of the Employer shall be final and binding.
9.4	Any Tender received after opening of the tender shall be rejected and returned unopened to the Tenderer.
10.0	Withdrawal of tender
10.1	No tender can be withdrawn after submission and during tender validity period.



10.2	Submission of a tender by a Tenderer implies that he had read all the tender documents including amendments if any, visited the site and has made himself aware of the scope and specifications of the work to be done, local conditions and other factors having any bearing the work.
11.0	Sealing and Marking of tender document
11.1	The bidder shall submit the sealed tender in original clearly mentioning the name of work, due date and time of submission of the tender, name and address of the bidder and address of the tenderer.
12.0	Transfer of Tender document
12.1	Transfer of Tender documents purchased by one intending Tenderer to another Tenderer is not permissible. Tenderer can submit tender only on the documents purchased by him.
13.0	EARNEST MONEY DEPOSIT
13.1	The Tenderer must furnish the Earnest Money as indicated in NIT for the work as specified failing which the tender shall be summarily rejected. The Earnest Money may be in any one of the following forms: a. Earnest Money Deposit of Rs. 2,22,030/- may be submitted in the form of demand draft/bankers cheque of any scheduled bank or nationalized bank in India in favour of "National High Speed Rail Corporation Ltd" payable at New Delhi. Tender received without Earnest Money Deposit shall be summarily rejected. b. No interest shall be admissible on Earnest Money Deposit. For the successful Tenderer, earnest money will be retained as part of the security deposit.
13.2	Forfeiture of Earnest Money:
a)	The Earnest Money of the successful Tenderer is liable to be forfeited if he fails to: sign the Contract Agreement in accordance with the terms of the tender, or Commence the work within the time period stipulated in the tender.
b)	In case of forfeiture of EMD, the Tenderer shall be debarred from bidding in case of re-invitation of the tenders.
13.3	Return of Earnest Money:
a)	The Earnest Money of the unsuccessful Tenderers in the form of demand draft/bankers cheque shall be returned/ directly credited to his bank account through Electronic Fund Transfer, under advice to the bidder.
14.0	SECURITY DEPOSIT
14.1	Security Deposit : The Earnest Money deposited by the Contractor with his tender will be retained by the NHRCL as part of security for the due and faithful fulfillment of the contract by the contractor. The balance to make up the Security Deposit, the rates for which are given below, may be recovered by percentage deduction from the Contractor's "on account" bills. Provided also that in case of defaulting contractor, the NHRCL 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.
14.2	<p>Recovery of Security Deposit: Unless otherwise specified in the Special Conditions, if any, the Security Deposit/rate of recovery/mode of recovery shall be as under :</p> <p>(a) Security Deposit for each work should be 5% of the contract value,</p> <p>(b) The rate of recovery should be at the rate of 10% of the bill amount till the full Security Deposit is recovered,</p> <p>(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 (except Note (ii) below); FD etc. shall be accepted towards Security Deposit. Security Deposit shall be returned to the contractor after the expiry of the maintenance period of one year in all the cases other than Note (i) mentioned below and after passing the final bill based on No Claim Certificate with the approval of the Competent Authority. The competent authority shall normally be the authority who is competent to sign the contract. The certificate, inter alia, should mention that the work has been completed in all respects and that all the contractual obligations have been fulfilled by the contractor and that there is no due from the contractor to NHSRCL against the contract concerned. Before releasing the SD, an unconditional and unequivocal 'No Claim Certificate' from the contractor concerned should be obtained.</p> <p>Note -</p> <p>i) After the work is physically completed, Security Deposit recovered from the running bills of a contractor can be returned to him, if he so desires, in lieu of FDR/irrevocable Bank Guarantee for equivalent amount to be submitted by him.</p> <p>ii) Defect Liability Period – The material supplied under this contract shall be guaranteed fully over for a period of 18 months after their delivery or 12 months from the date of placement in service whichever shall be sooner.</p> <p>iii) However the warranty of material as applicable in case of important and bulk materials like Cables, Datacom equipment's etc. shall be passed on to Railways/Utility owner. The contractor shall ensure through the OEM for the necessary documentation between the OEM and Railways.</p> <p>No interest will be payable upon the Earnest Money and Security Deposit or amounts payable to the Contractor under the Contract, but Government Securities deposited in terms of Sub-Clause (i) of this clause will be payable with interest accrued thereon.</p>
15.0	PERFORMANCE GUARANTEE
15.1	<p>The procedure for obtaining Performance Guarantee is outlined below :</p> <p>(a) The successful bidder shall have to submit a Performance Guarantee (PG) within 21 (twenty-one) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 21(twenty one) days and up to 60 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However, a penal interest of 12% per annum shall be charged for the delay beyond 21 days (twenty one) , i.e. from 22nd day after the date of issue of LOA. Further, if the 60th day happens to be a declared holiday in the concerned office of the NHSRCL, submission of PG can be accepted on the next working day. In all other cases, if the Contractor fails to submit the requisite PG even after 60 days from the date of issue of LOA, the contract is liable to be terminated. In case contract is terminated, NHSRCL shall be entitled to forfeit Earnest Money Deposit. and other</p>



	<p>dues, payable against that contract. In case a tenderer has not submitted Earnest Money Deposit on the strength of their registration as a Start up recognized by Department of Industrial Policy and Promotion (DIPP) under Ministry of Commerce and Industry, DIPP shall be informed to this effect. The failed Contractor shall be debarred from participating in re-tender for that work.</p> <p>(b) The successful bidder shall submit the Performance Guarantee (PG) in form of Irrevocable Bank Guarantee from any Scheduled bank, amounting to 5% of the contract value.</p> <p>(c) The Performance Guarantee shall be submitted by the successful bidder after the Letter of Acceptance (LOA) has been issued, but before signing of the contract agreement. This P.G. shall be initially valid up to the stipulated date of completion plus 60 days beyond that. In case, the time for completion of work gets extended, the contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.</p> <p>(d) The value of PG to be submitted by the contractor will not change for variation up to 25% (either increase or decrease). In case during the course of execution, value of the contract increases by more than 25% of the original contract value, an additional Performance Guarantee amounting to 5% (five percent) for the excess value over the original contract value shall be deposited by the contractor.</p> <p>On the other hand, if the value of contract decreases by more than 25 % of the original contract value, performance Guarantee amounting to 5% (five percent) of the decrease in the contract value shall be returned to the contractor. The PG amount in excess of required PG for decreased contract value, available with NHSRCL, shall be returned to contractor as per his request duly safeguarding the interest of NHSRCL.</p>
16.0	PERIOD OF VALIDITY OF THE TENDER
16.1	The tender shall remain valid for the period indicated in tender document/ NIT after the date of the opening of the tender. If the Tenderer gives validity period less than that fixed/prescribed by Employer, the tender shall be liable to be rejected.
16.2	Notwithstanding the above clause, Employer may solicit the Tenderers' consent to an extension of the validity period of the tender. The request and the response shall be made in writing.
17.0	SUBMISSION OF TENDERS
17.1	<p>The offer is to be submitted in two sealed envelopes with one envelope containing the technical cum Commercial Bid duly super-scribed thereon as "Technical cum Commercial Bid (Packet-1)", Name of work, Tender No. and date of opening and the other envelope containing the Financial Bid duly superscribed thereon as "Financial Bid(Packet-II)", Name of work and Tender No.</p> <p>Packet-I shall contain the EMD, cost of tender form and the "Technical Cum Commercial bid" along with requisite documents/credentials, Packet-II shall contain the "Financial Bid" only. Both the envelopes should again be sealed in another large envelope duly superscribed with "Name of work, Tender No. and Date of Opening" and same shall be deposited in the Tender Box allotted for the purpose in the office of the Office of Chief Project Manager(Systems),3rd Floor, Riverfront House, Between Gandhi & Nehru Bridge, Riverfront (west),Ahmedabad-380009.Tender duly sealed in the prescribed manner can also be sent through registered post so as to reach these offices not later than the date and time specified above.</p>
17.2	The tender shall be submitted on or before the due date and time with all the relevant documents as mentioned in the tender documents and the following: Forwarding letter of the Tenderer.



	Documents as per ITT. The Bill of Quantities (BOQ) with quoted price and% above/below/at par(select only one).
17.3	Before submitting the tender, the Tenderer/s will be deemed to have satisfied himself by his actual inspection of the site, climatic condition records from state government and/or Indian Meteorological Department and the locality of the works that all conditions liable to be encountered during execution of the works are taken into account and that the rates quoted by the Tenderer/s in the tender schedule are adequate and all-inclusive for the completion of works to the entire satisfaction of the Officer-in-charge.
18.0.	BID OPENING AND EVALUATION
18.1	Tenders will be opened at the address mentioned in "Notice Inviting Tender" in presence of Tenderers or authorized representatives of Tenderers who wish to attend the opening of tenders. Physical presence during Bid opening is optional.
18.2	Tenderers or their authorized representatives who are present shall sign register in evidence of their attendance.
18.3	The Technical cum Commercial Bid will be opened first, Technical details & commercial conditions will be read out in the presence of such tenderer(s) as is/are present. Envelopes containing Financial Bids will be initialed along with date by tender opening members and these shall be further put together and sealed in a larger envelope indicating thereon name of work, tender no., name & address of bidders.
18.4	Tenders which are received after the time and date specified above may not be considered. In case the scheduled date for opening of tenders is declared a holiday, the tenders will be opened on the next working day at the same time.
18.5	Technical cum commercial offers shall be evaluated for responsiveness and eligibility of the bids. Unresponsive / ineligible bidder's Financial offers shall be returned unopened to the bidders.
18.6	The time, date and venue of opening of Financial Bids shall be notified to successful tenderer(s) after evaluation of Technical cum Commercial Bids. The same shall be opened on due date in the presence of the tenderers /their representatives if they wish to attend the same. Tenderers name, presence or absence of requisite total cost of work quoted or any other details as Employer may consider appropriate will be announced and recorded at the time of bid opening.
19.0	PROCESS TO BE CONFIDENTIAL
19.1	Except the public opening of Bid, information relating to the examination, clarification, evaluation and comparison of Bids and recommendations concerning the award of Contract shall not be disclosed to Bidders or other persons not officially concerned with such process.
19.2	Any effort by a Bidders to influence the Employer/Engineer in the process of examination, clarification, evaluation and comparison of Bids and in decisions concerning award of contract, may result in the rejection of the Bid.
20.0	CLARIFICATION OF THE TENDERS
20.1	To assist the examination, evaluation and comparison of the tenders, Employer may at his discretion ask the Tenderers for any clarifications as considered essential. All such correspondence shall be in writing and no change in price or substance of the tender shall be sought or permitted. The above



	clarification for submission of the details shall form part of the tender and shall be binding on Tenderer.
21.0	DETERMINATION OF RESPONSIVENESS
21.1	Prior to the detailed evaluation of Bids, the authorized committee of NHSRCL will determine whether each Bid is responsive to the requirements of the Bid documents.
21.2	For the purpose of this Clause, a responsive Bid is one which confirms to all the terms, conditions and specifications of the Bid documents without material deviation or reservation. "Deviation" may include exceptions, exclusions & qualifications. A material deviation or reservation is one which affects in any substantial way the scope, quality, performance or administration of the works to be undertaken by the Bidders under the Contract, or which limits in any substantial way, the Employer's rights or the Bidders obligations under the Contract as provided for in the Bid documents and / or is of an essential condition, the rectification of which would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids at reasonable price.
21.3	If a Bid is not substantially responsive to the requirements of the Bid documents, it will be rejected by the Employer, and will not subsequently be permitted to be made responsive by the Bidders by correction or withdrawal of the non-conformity or infirmity. However minor clarification if required may be asked from the Bidders.
21.4	The decision of the Engineer/Employer as to which of the Bids are not substantially responsive or have impractical / methods or Programme for execution shall be final.
22.0	NEGOTIATION
22.1	NHSRCL reserves the right to negotiate the offer submitted by the Tenderer/s to withdraw certain conditions or to bring down the rates to a reasonable level. The Tenderer must note that during negotiation of rates of items of BOQ can only be reduced and not increased by the Tenderer. In case the Tenderer introduces any new condition or increases rates of any item of BOQ, his negotiated offer is liable to be rejected and the original offer shall remain valid and binding on him. Should NHSRCL decide to negotiate with view to bring down the rates, the Tenderer called for negotiation should furnish the following form of declaration before the commencement of negotiation. "I _____ do declare that in the event of failure of contemplated negotiations relating to Tender No. _____ dated _____ my original tender shall remain open for acceptance on its original terms and conditions."
23.0	Evaluation of Bid.
23.1	Technical Bid (Packet-1) will be opened first.
23.1	NHSRCL shall examine the bids to determine whether they are complete, whether copy of all relevant documents have been received not later than the prescribed date and time for bid submission and generally in order.
23.2	Prior to the detailed evaluation, Employer shall determine whether each bid is of acceptable quality, is generally complete and is substantially responsive to the bidding documents. For purposes of this determination, a substantially responsive bid is one that conforms to all the terms, conditions and



	<p>specifications of the bidding documents without material deviations, objections, conditionality or reservation. A material deviation, objections, conditionality or reservation is one:</p> <p>That affects in any substantial way the scope, quality or performance of the contract.</p> <p>That limits in any substantial way, inconsistent with the bidding documents, the Employers' rights or the successful Bidder's obligations under the contracts; or</p> <p>Whose rectification would unfairly affect the competitive position of other Bidders who are presenting substantially responsive bids.</p>
23.3	In case of tenders containing any conditions or deviations or reservations about contents of tender document, Employer may ask for withdrawal of such conditions/deviations/reservations. If the Tenderer does not withdraw such conditions/deviations/ reservations, the tender shall be treated as non- responsive. NHSRCL's decision regarding responsiveness or non-responsiveness of a tender shall be final and binding.
23.4	After Qualifying in Technical Bid (Packet-1) Financial Bid packet will be opened and evaluated.
23.5	Arithmetical errors shall be rectified on the following basis. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between subtotals and the total price, the unit or subtotal price shall prevail, and the total price shall be corrected.
23.6	If percentage value rates and quoted rates have difference, Lower one will be considered for evaluation.
24.0	CANVASSING
24.1	No Tenderer is permitted to canvass to Employer on any matter relating to this tender. Any Tenderer found doing so may be disqualified and his bid may be rejected.
25.0	RIGHT TO ACCEPT ANY TENDER OR REJECT ALL TENDERS
25.1	NHSRCL reserves the right to accept, split, divide, negotiate, cancel or reject any tender or to annul and reject all tenders at any time prior to the award of the contract without incurring any liability to the affected Tenderers or any obligation to inform affected Tenderer, the grounds of such action.
26.0	AWARD OF CONTRACT
26.1	NHSRCL shall notify the successful Tenderer in writing by a Registered Letter/Courier/ Speed Post/FAX or per bearer that his tender has been accepted.
26.2	Letter of Acceptance after signed by the Contractor in token of his acceptance shall constitute a legal and binding contract between NHSRCL/Railways and the Contractor till such time the contract agreement is signed. The contract agreement is to be signed within 10 days from the date of issue of letter of acceptance. The Contractor shall have the Agreement stamped at the Stamping Officer and bear the cost in relation thereto.
27.0	STANDARD OF SERVICE (S)



	<p>Tenderer shall carry out the services in conformity with the generally accepted norms and sound standards. Tenderer shall be responsible for the services rendered. In case of any deficiency or otherwise Tenderer shall promptly correct the same.</p> <p>The Contractor shall indemnify and save harmless NHSRCL from and against all actions, suit proceedings losses, costs, damages, charges, claims and demands of every nature and description brought or recovered against NHSRCL by reason of any act or omission of the Contractor, his agents or employees, in the execution of the works or in his guarding of the same. All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the actual loss or damage sustained, and whether or not any damage shall have been sustained.</p>
28.0	COMPLETION OF WORK (S)
	The duration of work shall be 12 months.
29.0	TERMINATION
	Notwithstanding anything otherwise contained in the agreement, if the contractor, for any reason whatsoever, is unable or unwilling to perform the works for a considerable period, then "NHSRCL" shall be entitled to terminate agreement or the order of a particular work upon 7 days' written notice to Tenderer.
28.0	INSURANCE
	Tenderer shall arrange for any payment of the cost of Personal Accident Insurance in respect of their employee(s) & equipment's at site assigned for performance of the obligations under the conditions of agreement.
29.0	PATENTS:
	No patented or patent pending articles, methods or device shall be used or supplied in connection with the work or incorporated in the work without the prior written approval of the Engineer-in-charge, if the terms of purchase involve or require the payment of any license fee or royalty in addition to the purchase price, and do not contain patent indemnification in a form satisfactory to NHSRCL. Tenderer shall not publish any/article or photograph relating to work without written consent NHSRCL.
30.0	LAWS GOVERNING AGREEMENT
	Disputes, controversies or differences of any kind whatsoever which may arise between the parties, out of or in relation to or in connection with the consultancy agreement, or for the breach thereof including claims or questions as to damages shall be settled between the parties by doing utmost, in a fair and amicable manner, in a spirit of mutual co-operation. Notwithstanding such efforts, in case the dispute shall not be settled/resolved by mutual co-operation, all disputes of differences whatsoever arising between the parties out of or in relation to the any meaning and operation or

Seal & Signature of Tenderer

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	effect of this contract of the breach thereof shall be settled in accordance with the DPE guidelines in this regard.
31.0	FORCE MAJEURE
	<p>War, invasion, revolution; riots, sabotage, lockouts, strikes, work shutdowns imposed by Government Acts it legislature or other authorities' stoppage in supply of materials fuel or electricity, breakdowns of machinery, act of God, epidemics, or any other acts or events whatsoever which are beyond reasonable control of Tenderer and which shall directly or indirectly prevent completion of the project within the time specified in the agreement, will be considered Force Majeure.</p> <p>Tenderer shall be granted necessary extensions to cover the delay as caused by Force Majeure without any financial repercussions.</p>

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SPECIAL CONDITIONS OF CONTRACT

A	GENERAL OBLIGATION
1.0	Sub-Contracting:-The complete work cannot be Sub-contracted back to back. Some specific specialized works can be sub-contracted with the approval of NHSRCL. a) The Sub contractor must have experience of executing similar nature of work. b) The Contractors shall be fully responsible for the management and control of his sub-contractors in relation to all interfacing activities carried out under the Contract. c) The procedures for the evaluation, selection, engagement and monitoring of sub-contractors / suppliers together with the means of application of quality assurance to their work including audit and acceptance shall be decided by the Engineer-in-charge or his authorized representative.
2.0	Laws Governing the Contract
2.1	The contract shall be governed by the laws in force in Gujarat.
3.0	Mobilization Advance
3.1	No mobilization Advance shall be paid to the contractor.
4.0	Working Hours
4.1	Not Applicable
5.0	Medical and Personal Accident Insurance
5.1	Medical and Personal Accident Insurance will be borne by the Contractor as per govt. norms.
6.0	NOTICES AND INSTRUCTIONS
6.1	Notice or instructions to be given to the Contractor under the terms of the contract shall be deemed to have been served on him if it has been delivered to his authorized agent or representative at site or if it has been sent by registered post to the office, or to the address of the firm last furnished by the Contractor.
7.0	SUPPLY OF MATERIALS TOOLS AND EQUIPMENT BY THE EMPLOYER
7.1	No material, tools, and equipment shall be supplied by the Employer. The Contractor has to arrange all tools, equipment, nothing extra shall be payable to the Contractor on this account. The contractor should have the capacity to keep the equipments in good fettle.
8.0	USE AND CARE OF SITE
8.1	The Contractor shall not demolish, remove or alter structures or other facilities on the site without prior approval of the in-charge.
8.2	All garbage/debris shall be removed from site as they accumulate. All garbage/debris shall be disposed to the approved Ahmedabad Municipal Corporation locations in covered position. The



	transportation for disposing the debris shall also be arranged by the contractor. The Waste disposal shall be done in sealed condition without affecting the Environment
8.3	All Electrical Works shall be done under the supervision of an authorized representative of NHSRCL
8.4	Accidents; - It shall be the entire responsibility of the contractor to adopt all the safety measures in deploying personnel who are adequately trained in safety. If any accident occurs due to negligence on the part of the contractor's personnel, it shall be the full responsibility of the contractor.
9.0	Payment Terms
9.1	Payment of wages, all allowances and benefits, leave entitlement, EPF Contributions, insurance (as applicable) etc. shall be the Contractor's responsibility as per the Acts prevailing in India and Local Authority.
9.2	Payment shall be released by NHSRCL to Contractor on submission of measurement done by site engineer of NHSRCL (will be deputed by Engineer-in-Charge). All measurements and quantities shall be expressed in units as defined in "Bill of Quantities"
9.3	For the purpose of On-account payment, the contractor shall submit detailed activities carried out as per BOQ recorded in Measurement sheets, Abstract sheets along with recorded bill for the item actually executed for checking and payment. Payment will be effected based on unit rates as approved in the Bill of Quantities. 100% payment shall be made after satisfactory completion of individual schedule Item/work. The contractor shall submit necessary documents and Bill in the standard format for payment.
9.4	All payment to the Contractor shall be made through NEFT/RTGS / Account payee cheque. For the purpose of RTGS Contractor has to provide his A/c Number, name of Bank, IFSC code of Bank and Address of bank etc.
10.0	Variation
10.1	On account variation in quantities in item rate BOQ based on the contract, and / or introduction of new Non-schedule items and scheduled items not covered in the contract shall be governed by the Schedule of Power of NHSRCL.
11.0	Completion period
11.1	The entire services covered under this work shall be completed within a period as specified in the tender document from the date of issue of Letter of Acceptance by NHSRCL.
11.2	Contract period of 12 months is provided. Any extension if required, Railways will give in writing for the extension and the rates will be decided on price adjustment basis.
12.0	Provisions for Operation of contract
12.1	This contract which shall be valid for one year from the date of award/ LOA. However the validity of contract may be extended for further six months on mutual consent of contractor and NHSRCL at the same terms and conditions. Formal agreement shall be signed after unconditional acceptance of award letter by contractor. The work is to be carried out anywhere in the jurisdiction of NHSRCL.



	<p>This contract so NHSRCL shall give Letter of Intent (LOI) to execute the miscellaneous electrical works as and when required during the currency of contract. The contractor has to execute the given works as per the specifications and running contractor's bills shall be paid by NHSRCL. The proper account of the work done item-wise/LOI shall be maintained in a register by Authorized representative of Engineer – in - Charge.</p> <p>The firm has to submit field service report of the work done duly signed by the designated staff of NHSRCL.</p> <p>All the material will be under the charge of contractor till it is completed and handed over. Safe custody of material shall be the firm's responsibility even if any running payments have been made for material brought at site or installed. However, no material shall be removed from site without written permission of Engineer in charge.</p> <p>It is the duty of the contractor to get approved the layout drawing from the Engineer in charge well in time after receipt of the LOI/ requisition of the work. Contractor should submit the final as built drawing before final payment of the individual work.</p> <p>Minor repair/dismantling of civil work etc. should be done by the contractor without any extra cost. Contractor should make liaison with concerned department/other contractor for execution of work.</p>
13.0	Priority of Contract Documents.
13.1	<p>In case of any conflict, discrepancy, inconsistencies, ambiguities between the various documents in the contract, the following order of priority shall be followed. However, the interpretation of Engineer/Employer shall be final in this regard.</p> <p>(a) Agreement (b) Letter of Acceptance of tender. (c) Special Conditions of contract (d) Instruction to the Tender (e) Form of Bid (f) Technical Specification (g) Bill of Quantities (BOQ)</p>
14.0	Important Special Conditions
14.1	<p>INDEMNITY: The Contractor shall at all times indemnify to the NHSRCL administration against all claims which may arise due to any incident or otherwise or due to the breach of the terms and conditions mentioned herein and owing to any sort of act of commission on the part of the contract during the currency of the contract.</p>
14.2	<p>That the Contractor agrees to indemnify to the NHSRCL administration against all claims for compensation by on or behalf of team members employed by him in connection with the present contract for any injury or death by an accident under the Workmen's Compensation Act. VIII of 1923 and the NHSRCL Administration will be entitled to deduct from any sum of money payable to the Contractor the amount of compensation thus payable under the terms of section-12 of the said act together with all or any cost incurred by the NHSRCL administration in such connection and the Contractor further agrees that the decision of the NHSRCL Officer-in-charge with respect to the amount of such indemnity shall be accepted by him finally. The Contractor shall hold and save</p>



	harmless and indemnify the Client/Employer/ officer-in-charge and their employees, from all actions, suits, proceedings, loss, costs, damages, charges, claims and demands of every nature and description brought against or recovered from the Client/Employer/ officer-in-charge and their employees by reason of any act or omission of the Contractor and/or his representative and/or his Employees and/or his Contractor in the execution of the works or in the guarding of the same. All the sums payable by Client /Employer/ officer-in-charge by way of compensation under any of these conditions shall be recovered from the dues of the Contractor, without reference to the actual loss or damage sustained, and whether or not any damage shall have been sustained.
14.3	NHSRCL in no case is responsible for any legal matter arising of any state / central govt. laws in matter of employment of the employees by owner of the agency or in respect of any other matter.
14.4	NHSRCL reserves the right to close the Contract at any time without assigning any reasons thereof by giving a 7 days' notice. Contractor shall not be entitled for any compensation in such eventuality.
15.0	Penalty
15.1	<p>The time for the execution of the work or part of the works specified in the contract documents shall be deemed to be the essence of the contract and the works must be completed not later than the date(s) as specified in the contract. If the contractor fails to complete the works within the time as specified in the contract. The NHSRCL may, if satisfied that the works can be completed by the contractor within reasonable short time thereafter, allow the contractor for further extension of time. Depend on the situation of work on such extension the NHSRCL may be entitled without prejudice to any other right and remedy available on that behalf, to recover from the contractor as agreed damages and not by way of penalty a sum equivalent to ½ of 1% of the contract value of the works for each week or part of the week as decided by Engineer in Charge. The total amount of liquidated damages under this condition, shall not exceed the under noted percentage value or of the total value of the item or groups of items of work for which a separate distinct completion period is specified in the contract.</p> <p>(i) Up to Twenty percent of original period of completion including period of extension of DOC granted :- As decided by Engineer, between 0.01% to 0.10% of contract value for each week or part of the week</p> <p>(ii) Above Twenty percent but upto Thirty percent of original period of completion including period of extension of DOC :-0.20% of contract value for each week or part of the week</p> <p>(iii) Above Thirty percent but upto Forty percent of original period of completion including period of extension of DOC :- 0.30% of contract value for each week or part of the week</p> <p>(iv) Above Forty percent of original period of completion including period of extension of DOC:- 0.50% of contract value for each week or part of the week.</p>
16.0	Statutory Law & Regulations

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16.1	<p>1. The contractor shall be responsible for ensuring compliance with the provisions related to Labour Law [Central/State] and specially Minimum Wages Act, Payment of Wages Act, PF, ESI Act, Payment of Bonus Act, Contract Labour [R&A] Act, Workmen Compensation Act etc. as applicable from time to time. The employees of the contractor shall not be deemed to be employees of the NHSRCL/Railways hence the compliance of the applicable acts laws will be the sole responsibility of the contractor.</p> <p>2. The service provider shall submit his monthly bills in triplicate towards the service rendered on the previous month to the user. Payment shall be effected by credit into the bank account of the contractor through ECS/RTGS within 15 days from the date of receipt of bills with supporting documents, complete in all respect. The contractor will have to intimate the bank account number, and other details of the bank to enable the NHSRCL/Railways to credit the payments directly into the account. Railways shall pay the vendor all amounts on an invoice that are not the subject of a bona fide dispute within 15 days after department's receipt of a valid invoice that complies in all material respects in terms of this contract; the payment shall be subject to any deductions such as penalties, statutory deduction etc.</p>
17.0	Termination
17.1	<p>If the Contractor abandons the contract, or persistently disregards instructions of the Officer-in-charge or contravenes any provisions of the contract, or fails to adhere to the agreed program of work or fails to provide services as desired by the officer or part thereof within time because of poor service; as per the terms & conditions of contract, then the contract for the hiring of vehicle shall be subject to termination without prejudice.</p>
18.0	Other Conditions
18.1	<p>GST shall be paid by the contractor, necessary documentary proof shall be submitted by the contractor. The Contractor must ensure competent engineer/staff of NHSRCL shall be lawful in all respects, and shall not under any circumstances put NHSRCL in any position where, NHSRCL is in breach of any laws, regulations, or directions of any authority including (but not limited to) laws, regulations or directions dealing with health, safety, timely payment of wages, minimum wages and provision of staffs.</p>
18.2	<p>INSPECTION OF INSTALLATION:</p> <p>i) The Engineer in charge or his representative may inspect and test the various portions of the work at all stages and shall have full power to reject all or any portion of the work that he may consider to be defective or inferior in that he may consider to be defective or inferior in quality or material, workmanship, or design in comparison to what is called for in the specification. In the event of rejection of any work already executed which is not in accordance with specifications as in this Tender Papers and/or as determined by the Engineer of which the contractor has been apprised, the contractor shall carry out alterations/replacements to such works to the satisfaction of the Engineer for which no additional expenses will be borne by the NHSRCL.</p> <p>ii) The contractor shall carry out such tests at his own expenses as are necessary in the opinion of the Engineer to determine that the contract is being complied with and that the contractor is entitled to</p>



	<p>payment in respect thereof. Any tools/any other Materials/Plants/Manpower required for such tests shall be arranged by the contractor.</p> <p>iii) Even if the Engineer's Representative remained associated or supervised the progress of works at various stage, a joint inspection, for each item of works, by Engineer's Representative and Contractor's Representative will be carried out to check that the work has been done as per specification and measurement taken accordingly.</p> <p>iv) Before casting of foundation, if any, the Contractor's Representative and the Engineer's Representative shall jointly inspect the quality and depth of pits, quality of bricks, concrete mix etc. and ensure compliance with the Drawings and specification.</p>
18.3	<p>MEASUREMENT:</p> <p>The measurement of quantities for the purpose of payment to the contractor shall be undertaken jointly by the representative of the Engineer and the Contractor in the course of and/or on completion of all works included (Schedule/s) item wise to the satisfaction of NHSRCL Engineer. The measurement of quantities shall be made only after ensuring conformity with specifications and various clause of the contract</p>
18.4	<p>EXECUTION AT SITE:</p> <p>i) The contractor shall abide by all the NHSRCL relating to safety of personnel and Railway Operation.</p> <p>ii) The NHSRCL will promptly arrange to protect traffic upon request of the contractor, when required.</p> <p>iii) In respect of important items of work the contractor's representative should be present at site at least for the execution and under his supervision the installation of the work and tests should be completed in all respect to the satisfaction of NHSRCL Officials concerned.</p> <p>iv) Cable laying shall be as per Western Railway latest circular in this regards and RDSO guidelines.</p> <p>v) Installation of any equipment / cable termination etc. shall be latest RDSO/IRS/WR guidelines.</p> <p>vi) Before proceeding to execute any work, the contractor shall obtain from the NHSRCL Engineer or his authorized representative, approval in writing in the manner in which the contractor proposes to execute each portion of the work</p>
18.5	<p>PROCUREMENT OF SUPPLY ITEMS :</p> <p>i) All items supplied to NHSRCL should be procured from the list of firms given in tender.</p> <p>ii) In case if any supply item is not in the list of RDSO approved firms, prior approval of Engineer incharge for such items from other sources are necessary. In case I.R.S. specification are not available for items, the material should conform to Bureau of Standard Institution (Latest) (i.e. I.S.I.) wherever the specifications are available, otherwise the prior approval of these items specifications by Engineer incharge is necessary.</p> <p>iii) It should be clearly understood that it is entirely contractor's responsibility and liability to find, procure and use of machineries, tools, plants and their spare parts that are required for efficient and</p>



	<p>methodical execution of work. Delay in procurement of such items due to non availability or import difficulties or any other causes what so ever will not be taken as an excuse for slow and non-performance of work.</p> <p>iv) All materials in the tender documents shall be supplied by the contractor at site. These shall include the materials in additions to any other minor items such as bolts, nuts, brackets, support materials which may be considered necessary for execution of the work according to the specifications.</p> <p>v) All instruments required, for testing shall be arranged by the contractor and shall remain his property.</p>
18.6	<p>i) The NHSRCL will not be responsible for loss or damage to the contractor's materials, equipment, tools & plants due to floods, theft or any other cause or causes whatsoever.</p> <p>ii) The contractor shall be held responsible for any damage to Railway property like telephone lines, cables which may be caused by any of his action in connection with or in the execution of the work.</p>
19.0	<p>Client/Consignee:</p> <p>The contractor should consign, if need be, all the materials to 'Self' to the nearest stations where materials can be booked for stacking before erection/installation.</p>
19.1	<p>CONTRACTOR TO MAKE GOOD THE DEFECTIVE EQUIPMENT :</p> <p>If the completed equipment or any portion thereof, before it is taken over, be found to be defective or the contractor otherwise fails to ful fill the requirements of the contractor and/or its purpose, the NHSRCL shall give the contractor notice, setting for the particulars of such defects or failure and the contractor shall forthwith make the defects good or alter the same to make it comply satisfactorily with the said requirements. Should the contractor fail to do so within a reasonable time after the service of the said notice upon him, the NHSRCL may reject and replace the whole or part of such defective equipment's as the case may be at the cost of the contractor, such replacements shall be carried out by or at the instance of NHSRCL within a reasonable time and as far as reasonably practicable, the same specification and under competitive conditions. The Contractor's full liability under this clause shall be satisfied by the payment to the NHSRCL of the total cost, if any, such replacement delivered and erected as provided for in the original contract, such extra cost being the ascertained difference between the cost of equipment purchased and replaced by the NHSRCL under the provision mentioned above for such replacement and contract price for the plant so replaced, plus sum, if any paid by the NHSRCL to the contractor in respect of such defective equipment. Should the NHSRCL not so replace the rejected equipment within a reasonable time, the contractor's liability under this clause shall be satisfied by the repayment by the contractor of all money paid by the NHSRCL to him in respect of such rejected equipment.</p>
19.2	<p>RESPONSIBILITY FOR COMMISSIONING :</p> <p>Until the contract works have been provisionally accepted by the NHSRCL, the contractor shall be entirely responsible for the works, whether under construction, during the tests or in use of the NHSRCL's service in respect of preservation, guarding, safe running of trains and maintenance. The Contractor shall keep attendants constantly on the sites during the period until NHSRCL's provisional acceptance.</p>



19.3	NIGHT WORK : If the NHSRCL is however, satisfied that the work is not likely to be completed in time except by resorting to night work by special order, the contractor would be required to carry out the work even at night, without conferring any right on the contractor for claiming compensation.
20.0	Unfulfilled Obligations
20.1	Notwithstanding the issue of Completion Certificate, the Contractor and the officer-in-charge shall remain liable for the fulfillment of any unfulfilled obligations under the provision of the contract, prior to the issue of such Certificate, and for the purpose of determination of the nature and extent of any such obligation, the contract shall be deemed to remain in force between the parties thereto.
21.0	Settlement of Disputes
21.1	All disputes or differences of any kind whatsoever that may arise between the Employer/ officer-in-charge and the Contractor in connection with or arising out of the contract or subject matter thereof or the execution of works, whether during the progress of works or after their completion, whether before or after termination of contract shall be settled as under:
22.0	Mutual Settlement
22.1	All such disputes or differences shall in the first place be referred by the Contractor to the Employer in writing for resolving the same through mutual discussions, negotiations, deliberation etc. associating representatives from both the sides and concerted efforts shall be made for reaching amicable settlement of disputes or differences.
23.0	Conciliation / Arbitration.
23.1	It is a term of this contract that Conciliation / Arbitration of disputes shall not be commenced unless an attempt has first been made by the parties to settle such disputes through mutual settlement.
23.2	If the Contractor is not satisfied with the settlement by the Employer on any matter in question, disputes or differences, the Contractor may refer to the Managing Director of the Employer in writing to settle such disputes or differences through Conciliation or Arbitration provided that the demand for Conciliation or Arbitration shall specify the matters, which are in question or subject of the disputes or differences as also the amount of claim, item wise. Only such dispute (s) or difference (s) in respect of which the demand has been made, together with counter claims or the Employer shall be referred to Conciliator or Arbitrator as the case may be and other matter shall not be included in the reference.
23.3	Managing Director of the Employer may himself act as Sole Conciliator/Sole Arbitrator or may at his option appoint another person as Sole Conciliator or Sole Arbitrator, as the case may be. In case, Managing Director of the Employer decides to appoint a Sole Conciliator/Sole Arbitrator, then a panel of at least three names will be sent to the Contractor. Such persons may be working / retired employees of the Employer who had not been connected with the work. The Contractor shall suggest minimum two names out of this panel for appointment of Sole Conciliator / Arbitrator. Managing Director of the Employer will appoint Sole Conciliator /Sole Arbitrator. Managing Director of the Employer will appoint Sole Conciliator / Sole Arbitrator out of the names agreed by the Contractor.

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23.4	In case, the Contractor opts for settlement of disputes through Conciliation at first stage and if the efforts to resolve all or any of the disputes through Conciliation fails, the Contractor may refer to the Managing Director of the Employer for settlement of such disputes or differences through Arbitration. The appointment of Sole Arbitrator shall be done by Managing Director of the Employer as per the procedure described above. No disputes or differences shall be referred to Arbitration after expiry of 60 days from the date of notification of failure of Conciliation.
23.5	The Conciliation and/or Arbitration proceedings shall be governed by the provisions of the Arbitration Act and any statutory modification or re-enactment thereof and shall be held in any place in India.
23.6	The language of proceedings, documents or communications shall be in English and the award shall be made in English in writing.
23.7	The Conciliation/Arbitration proceedings shall be held at a place decided by Conciliator / Arbitrator.
23.8	The fees and other charges of the Conciliator / Arbitrator shall be as per the scales fixed by the Employer and shall be shared equally between the Employer and the Contractor.
24.0	Settlement through Court
24.1	It is a term of this contract that the Contractor shall not approach any Court of Law for settlement of such disputes, where such dispute is subject to Arbitration as referred to Clause 23.
25.0	No suspension of work
25.1	The obligations of the Employer, the officer-in-charge and the Contractor shall not be altered by reasons of conciliation /arbitration being conducted during the progress of works. Neither party shall be entitled to suspend the work on account of conciliation/arbitration nor shall payments to the Contractor continue to be made in terms of contract.
26.0	Award to be binding on all parties
26.1	The award of the Sole Arbitration, unless challenged in court of law, shall be binding on all parties.
27.0	Jurisdiction of Courts
27.1	The Indian courts shall be exclusive jurisdiction to hear and determine all actions and proceedings arising from the contract.
28.0	Secrecy/Non-disclosure
28.1	The Contractor shall ensure that all the information is kept totally confidential in connection with this bid and the Contractor shall not disclose or divulge the same to any unauthorized person failing which Employer /officer-in-charge reserve the right to terminate/cancel the contract or cease further dealing with the Contractor.

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ANNEXURES

ANNEXURE-A

SUPPLEMENTARY AGREEMENT

Articles of Agreement made on this in the year and between National High Speed Rail Corporation Limited acting through Office of Chief Project Manager (System), 3rd Floor, Riverfront House, Between Gandhi & Nehru Bridge, Riverfront (west), Ahmedabad-380009 hereinafter called as one party and of the second part.

Where the party hereto of the second part executed an agreement with the party hereto of the first part being agreement No. dated for the performance of herein called the principal agreement.

And whereas it was agreed by and between the parties hereto that the works would be completed by the party hereto of the second part on "date last extended" and whereas the party hereto of the second part has executed the work to the entire satisfaction of the party hereto of the first part and whereas the party hereto of the first part already made payments to the party hereto of the second part diverse sums from time to time aggregating to ` including the final bill bearing voucher No. dated (the receipt of which is hereby acknowledged by the party hereto of the second part) in full and final settlement of all his claim under the principal agreement.

Now it is hereby agreed by and between the parties in the consideration of sums already paid by the party hereto of the first part to the party hereto of the second part against all outstanding dues and claims for all works done under the aforesaid principal agreement including / excluding security deposit, the party hereto of the second part have no further dues / claims against the party hereto of the first part under the said principal agreement.

It is further agreed by and between the parties that they party hereto of the second part has accepted the said sums mentioned above in full and final satisfaction of all its dues and claims under the said principal agreement.

It is further agreed and understood by and between the party that in consideration of the payment already made under the agreement the said principle agreement shall finally discharged and rescinded all the terms and conditions including the arbitration clause.

It is further agreed and understood by and between the parties that the arbitration clause contained in the said principal agreement shall cease to have any effect and / or shall seems to be non-existent for all purposes.

Signature of the Tenderer/s

For & on behalf of the NHSRCL Official

Signatures of the Witness

Witness

.....

.....

Seal & Signature of Tenderer



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ANNEXURE-B

FORM OF AGREEMENT

(To be executed on requisite value of stamp Papers)

AGREEMENT

THIS AGREEMENT made on _____ day of _____ (Month/year) between **National High Speed Rail Corporation Limited**, (hereinafter called "the Employer/Engineer") of the one part and _____ (name and address of the Contractor) (hereinafter called "the Contractor") of the other part.

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

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meaning as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement:

Volume I:

- a) The Contract Agreement
- b) Letter of Acceptance
- c) Notice Inviting Tender with Annexures
- d) Special conditions of contracts
- d) Form of Bid
- e) Instructions to the Tenderers & Appendices
- f) Annexures/Forms

Seal & Signature of Tenderer



Volume II: Bill of Quantities

1. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
2. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

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

(Name, Designation and address of the authorised signatory)

(Name, Designation and address of the authorised signatory)

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

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

Witness:

Witness:

1.

1.

(NHSRCL)

2.

2.

(NHSRCL)

Name and address of the witnesses to be indicated

Seal & Signature of Tenderer

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ANNEXURE-C

APPLICATION LETTER
(On the Letter head of the Interested firm)

Date: DD-MM-YYYY

**Chief Project Manager(System),
National High Speed Rail Corporation Limited,
3rd Floor, Riverfront House,
Between Gandhi & Nehru Bridge,Riverfront (west),
Ahmedabad-380009**

Sub.: Notice Inviting Tender "Miscellaneous Electrical & telecom works from NHSRCL Chainage 508.00 to 416.00 including HSR depot in connection with NHSRCL work."

Dear Sir,

Being duly authorized to represent and act on behalf of (hereinafter referred to as "the Interested firm") and having reviewed and fully understood all of the requirements of the Tender Document and information provided, the undersigned hereby apply for the project referred above.

1. We are enclosing our Bid documents in one original, with the details as per the requirements of the NIT Documents, for your detailed evaluation.
2. The Financial Proposal is being submitted in a separate cover. This Technical Proposal read with the Financial Proposal shall constitute the Application which shall be binding onus.

.....
Signature & Stamp

(Authorised Signatory)

Seal & Signature of Tenderer

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ANNEXURE-D

FORMAT FOR WORK EXPERIENCE

- (i) The following information should be provided in the format indicated for each reference project for which your company, either individually as a corporate entity or as one of the major companies within a legally contracted by the client.
- (ii) The information should be specific & to the point to facilitate a quick and objective decision.
- (iii) CERTIFICATE FROM CLIENT SHALL BE ATTACHED AS A PROOF.

1	Name of work
2a	Nature of work:
2b	Details of Services provided.
2c	Whether the services rendered were satisfactory (Attach certificate)	
3	Detail of Client:	-Name of Client..... -Phone Number..... -Address.....
4	Duration of Assignment (please indicate start & finish date)	-Start Date: -Finish Date:.....
5a	Were services provided as JV/Consortium?	YES / NO
5b	If yes, then exact description of the division of responsibility between you & your Associate.
6	Payment received (Financial Year wise)	
7	Whether copy of work order, work completion and performance certificate from Client attached with payment details	YES / NO

Signature of Authorized Representative

Name : _____

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ANNEXURE-E

FORMAT FOR LIST OF WORK

- (i) The following information should be provided in the format indicated for each reference work for which your company, either individually as a corporate entity or as one of the major companies was legally contracted by the client.
- (ii) List shall be provided for only those projects where similar work were provided during last seven years.
- (iii) The information should be specific & to the point to facilitate a quick and objective decision.
- (iv) Certificate from client shall be produced for checking if demanded by committee members during Presentation.

1. List of organizations :

Sl. No	Name of Project	Name of Client	Value of Project (Rs)	Payments received (Financial Year wise)	Whether work executed in JV/Consortium	Details of works

Note : Additional sheets may be attached for providing complete details.

Signature of Authorized Representative _____

Name : _____

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TECHNICAL SPECIFICATIONS

1. The contractor shall carry out the electrical work as per IE Rules & Regulation, specification and shall be in work like manner. Relevant IS specifications wherever applicable shall be followed.
2. The work includes supply of materials, erection, installation, laying, terminating, connecting, testing, & commissioning of electrical assets as mentioned in the schedule of approximate quantity and rates and specification as enclosed in tender documents.
3. The contractor has to supply & provide ancillary materials required for the work even if they are not mentioned in the tender schedule for which no extra payment shall be made.
4. All the materials used in the work shall be of the make as per enclosed list and shall be got approved from CPM/System before its installation. Contractor shall have to arrange inspection at manufacturer's premises for LT panels DB, etc. by NHSRCL's representative. Material should be kept in safe custody by contractor. After entire completion of work the contractor shall have to deposit balance material to CPM/System/ADI office.
5. The contractor if damage other installation / structure for the purpose of executing electrical works shall do reconditioning of floors, walls and ceilings to their original level of workmanship.
6. All required tools and instruments shall be arranged by the contractor.
7. The unit rate in the rate schedule includes supply, installation, testing, & commissioning including all contingent material like hard ware, bushes, PVC flexible pipe, seamless pipe down rods, chain, clamps, connecting wires etc. even if not specified in the rates schedule. All hardware like Nuts, bolts, washers, clamps etc should be of GI.
8. Electrical works shall be carried out by the contractor in supervision of the railway Engineers and contractor shall inform the railway representative before starting the work. All the hidden work i.e. laying of cables, foundation etc. shall be carried out in the presence of railway supervisor / representative.
9. If any items technical specifications not mentioned in this documents, then item should be prior approved by CPM/System.
10. Any conflict/dispute/modification in specification given will be finalized by CPM/SYSTEM/NHSRCL/ADI and contractor has to accept the decision of CPM/SYSTEM/NHSRCL/ADI.
11. The contractor will be responsible for any damage / theft for part of the work completed & paid in running bills till entire work is completed and taken over by the NHSRCL.
12. The electrical contractor having valid electrical contractor's license shall carry out the work under the tender.
13. The contractor should have to carry NHSRCL officials to the place of work for inspection and providing the required tools and equipments etc., inspection is the responsibility of the contractor for which no additional payment is to be made.
14. The vehicle and equipment of the contractor can be the drafted by NHSRCL administration in case of accident / natural calamities involving human lives.
15. If the IS No. of any material in the tender is modified or amended, the latest shall be accepted.
16. NHSRCL may ask copies of challans, bills of Supplier/Manufacturer to verify genuineness of supplied material including taxes paid to government like Excise Duty, VAT, and Service Tax etc.



17. Lamp of the luminaries shall be of OEM make or if OEM used other reputed make lamps than it shall be accepted by NHSRCL on production of OEM certificate by the contractor. If complete fitting catalogue no comprising with different assemblies catalogue nos., then such type of certificate shall be issued by OEM and submitted by the contractor to NHSRCL. As per catalogue IP no. should be marked on the luminary or if it is not mentioned then, OEM certificate in this regard should be submitted by the contractor.
18. The work done by the contractor shall be of aesthetic look.
19. All switches, sockets, ceiling rose, lamp holders, switch boards should have engrave ISI marked in concave/convex manner.
20. Before starting of work contractor should carry out joint survey with NHSRCL Engineer of all work site & prepare drawing /design/layout of wiring, cabling, panels, DB and other electrical items to be provided at site & submitted to CPM/SYSTEM/NHSRCL/ADI for approval.
21. ACB/MCCB/MCB/RCCB/RCBO should be IS/IEC marked.
22. The contractor should provide tinned Copper bus bar for MCCB/ACB rating 125 Amp or more in LT panels.

STANDARDS

The following standards of latest/Revision edition and Indian Electricity Rules/Fire Insurance Regulations and rules shall be applicable:

IS No.	Items
IS : 1646/1997	Code of practice for fire safety of buildings (General) Electrical installation
IS : 9537 (Part - 3)/1983	Rigid non-metallic conduits for electrical wiring.
IS : 4648/1968	Guide for electrical layout in residential buildings.
IS 4615/1968	Switch socket out lets
IS 3419/1988	PVC Conduit accessories
IS 694:1990	Cables-LT PVC insulated multi-stranded single & multi-core
IS 3854/1997	Switches
IS 1293/2005	Plugs & sockets

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IS 371/1999	ceiling rose
IS 1258/2005	Pendent holder, batten holder
IS 8828/1996	MCB
IS 13947-2/1993	MCCB
IS 12640 (Pt.I) 2000	RCCB
IS 732/1989	Code of practice for electrical wiring installation
IS 3043/1987	Earthing
IS 13032:1991	AC MCB board for voltage not exceeding 1000V-specification.
IS 13779 ISI marked clause-1 /1999	Electronic energy meter

HT CABLE END TERMINATION BOXES (Outdoor type) (Item No. 65 to 70)

The contractor shall supply the heat shrinkable type outdoor end termination kits for 3-core 185sq.mm, aluminum conductor, XLPE insulated 11 KV (E) grade cable, of 3M, Denson or Reychem make.

The individual cores of the cables shall be properly identified to avoid cross connections of the core while jump ring them to the corresponding wire of the overhead lines.

The contractor shall engage skilled cable jointer for making the end termination and it should be provided only in presence of Railway representative after taking proper shut down. For termination of cable, proper size of cable gland and lugs to be provided.

HT CABLE END TERMINATION BOXES (Indoor type) (Item No.65 to 70)

The contractor shall supply the heat shrinkable type indoor end termination kits for 3-core 185 sq.mm, aluminum conductor, XLPE insulated 11 KV (E) grade cable, of 3M, Denson or Reychem make.

The individual cores of the cables shall be properly identified to avoid cross connections of the core while jumpering them to the corresponding wire of the overhead lines.



The contractor shall engage skilled cable jointer for making the end termination and it should be provided only in presence of NHSRCL representative after taking proper shut down. For termination of cable, proper size of cable gland and lugs to be provided.

11KV HT STRAIGHT THROUGH JOINT (ITEM NO. 79 to 84)

The contractor shall supply the heat shrinkable straight through jointing kits for 3-core 185 sq.mm OR 3 x 95 sqmm (UE) aluminum conductor, XLPE insulated 11 KV(E)/UE grade. Required as per site condition. Make- M- Seal (3 M), DENSON[®] or Raychem make and provide it in the existing 11KV (E)/UE grade cable by skilled cable jointer in presence of NHSRCL representative.

Digging of pit for cable repair and refilling shall also be done by the contractor.

DIGGING OF TRENCH & LAYING OF CABLE (Item No 17, 18, 19 & 37)

(i) DIGGING & RE-FILLING OF CABLE TRENCH: -

A trench of 450 mm in width and 1000 mm depth from the normal ground level in normal soil shall be made by the contractor and while laying the cable a layer of riddle soil shall be provided below and above the cable. After doing this the trench can be filled up with soil available thereby. If any damage done, contractor will make good the cost of damage as decide by railway. If any infringement comes in the digging route then contractor should remove the same. If any hard /stony soil, Contractor should adopt new technology method as per scope of work.

(ii) DIGGING & RE-FILLING OF CABLE TRENCH IN PCC/RCC/HARD SOIL: -

A trench of 450 mm in width and 1000 mm depth from the normal ground level in normal soil shall be made by the contractor and while laying the cable a layer of riddle soil shall be provided below and above the cable. After doing this the trench can be filled up with soil available thereby. If any damage done, contractor will make good the cost of damage as decide by railway. If any hard /stony soil, Contractor should adopt new technology method as per scope of work.

(iii) LAYING AND COMMISSIONING OF CABLES: -

The contractor shall have to transport all the cables to be used at site shall be issued by NHSRCL, Ahmedabad OR other places suggested by NHSRCL/WR and balance material shall also to be deposited back to Ahmedabad. Contractor shall lay the cable in existing trench, pipe & on Wall/ structure.

Before laying the cable in the ground / Pipes or on the wall/pillars/cable tray cable should be secured properly by providing saddling/clamping arrangement of proper size at suitable interval.

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Before and after laying the cable, the IR value should be checked and the contractor shall arrange all the testing instruments. In case of any failure contractor will again re-lay the cable at his own cost. Armouring of the cable shall be earthed at both end of the cable. Cable route marker shall be provided on the turning points and in straight portion. The cable marker shall be approved design and should be got approved before providing.

Wherever the cable comes out of the ground at least one loop of sufficient radius should be provided under the ground.

While laying the cable and while digging the trench it should be ensured that no obstruction should come in way of drainage line, power cables, telecommunication cables etc.

If any damage done, contractor will make good the cost of damage as decided by railway.

Crossing of Optical Fiber/QUAD/PIJF Cable with another cable

Crossing of the Optical Fiber cable with another cable shall be avoided wherever possible. Where, however, this is not possible, the Optical Fiber cable shall be laid in cement or asbestos cement pipes. The length of the pipe to be provided on either side of the crossing shall be at least one meter.

LT CABLE ROUTE MARKERS: (Item No.23)

The contractor shall supply, installation and commissioning cable route markers on route of cable at each turning point and suitable distance in straight portion as guided by Railway/NHSRCL representative.

The cable route marker shall be casted of C.I. with description suggested by NHSRCL/WR. After fabrication the complete marker assembly, it shall be hot dip galvanized to make it anti corrosive and got approved from NHSRCL before bulk supply.

HALF ROUND RCC PIPE 100 & 150 MM (Item No.41 & 42)

The contractor shall supply half Round RCC pipes of 100 & 150mm inner dia. and 1.0 Mtr in length as per given description. The internal surface shall have a smooth finish without any bulge or projections to avoid damage to the cable.

Internal dia.	External dia.	Thickness	Approx. Weight	Approx. steel Weight
100mm	125mm	25mm	11.5 Kg	190 gm
150mm	184 mm	25 mm	14.5 kg	240 gm

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LAYING OF PIPES:-

Half round pipes shall be laid above cables for mechanical protection on laid cables in the existing trench. After doing this the trench can be filled up with soil available thereby. If any damage done, contractor will make good the cost of damage as decide by railway.

SUPPLY OF HDPE PIPE 160MM (Item No.38)

The contractor shall supply, installation and commissioning of HDPE (High Density Polyethylene) pipe of 160 mm nominal dia. as per IS 4984-1995 With accessories required for laying such as coupler, bend etc.

Make- Tijaria, Himalyan, Konzept, Poddar, Unique OR similar and shall be got approved from NHRCL before supply.

Material grade and class	Description	Nominal diameter (mm)	Wall thickness of pipes (mm)	
			Minimum	Maximum
PE-80 & PN-4	HDPE (High Density Polyethylene) pipe	160	6.2	7.1

The contractor shall lay the HDPE pipes in the ground under the tracks/Road by push through method or by open excavation method (digging of trench) at a depth indicated in drawing supplied by Rly below the formation level. The term "formation" level means the earth surface just below the bedding of the ballast. If any hard /stony soil, Contractor should adopt new technology method in push through method or digging of trench. HDPE pipe length may be vary according to site.

Each length of the pipes shall be joined together properly using proper size of socket and aligned in a straight line, keeping an inclination to facilitate the draining of water.

Note- For HDD/push through & digging of trench rates will be given separately in schedule item.

LAYING OF HDPE/GI PIPES (Item No. 39):-

The contractor shall lay the HDPE/GI pipes in the ground under the tracks/Road by HDD/push through method at a depth indicated in drawing approved by NHRCL below the formation level as per requirement. The term "formation" level means the earth surface just below the bedding of the ballast. If any hard /stony soil, Contractor should adopt new technology method in HDD/push through method.

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Each length of the pipes shall be joined together properly using proper size of socket and aligned in a straight line, keeping an inclination to facilitate the draining of water.

MAIN DISTRIBUTION BOARD 150 A (Item No. 01)

- The contractor shall have to design, supply, installation, testing and commission DB fabricated by 2mm thick MS sheet, standard angles, channels etc. as required in design. The drawing, design switch gears with make and model of the MDB shall be submitted by the contractor & got approved by CPM/System/NHSRCL/Ahmedabad before fabrication.
- The DB shall be indoor cubicle type, rectangular size wall mounted dust and vermin proof suitable for 3 phase, 4-wire, 415V, 50Hz AC supply system.
- Provide Voltmeter & Ammeter of suitable capacity (According to MCCB Rating) with selector switch & CT on each phase of incoming feeder having 2x 150A or more capacity. Make as per List enclosed and shall be got approved from CPM/SYSTEM/NHSRSL/ADI before supply.
- Multi LED type indication lamp with control fuses on **incoming** feeder shall be provided. The indication lamps shall be of make as per List enclosed and shall be got approved from CPM/SYSTEM/ADI before supply only.
- All power connections from the Copper bus bar shall be made such that there is a clear metal to metal aerial contact at the tapping. The nuts and bolts used for connections to the bus bar shall be of GI/ Crom plated. Both spring washer and plate washer shall be used with stud/nuts/to ensure proper contact pressure.
- The sheet steel enclosure / angle / channel used in the fabrication of distribution board shall be provided with double coating of red oxide and final coating of light grey powder coated paint.
- The MDB shall be fabricated by CPRI approved manufacturer.
- Multi LED type indication lamp having colour code Red, Yellow & blue with control fuses on incoming feeder shall be provided. Make as per List enclosed.
- Minimum two earth terminals shall be provided in the DB. All sheet steel section shall be electrically connected with earth.
- DB shall be mounted on wall/pillars.
- The breaking capacity of MCCBs should not be less than 35KA with $I_{cs}=I_{cu}$ and should have variable setting type with thermal magnetic release.
- The MCB & MCCB shall be of make as per List enclosed and shall be got approved from CPM/SYSTEM/ADI before supply.
- The breaking capacity of MCBs should not be less than 10KA & 'C' curve

The MDB shall be comprised with following switch gears—

Incoming circuit -> 2x150 A MCCB 4-pole 35 KA adjustable type with thermal magnetic release.

Outgoing circuit -> 8 x 63 A 4-pole MCB & 10 KA Breaking Capacity of C-curve

➤ 6 x 32 A DP MCB & 10 KA Breaking Capacity of C-curve

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Note:- The contractor shall have to arrange inspection of the MDB at the manufacturer's premises at his own cost, if required.

SUB DISTRIBUTION BOARD 63 A (Item No. 02 & 03)

- Distribution Board (DB) shall be pre-wired in sheet steel enclosure, with DIN channel, neutral bus-bar. The box and cover shall be properly pretreated, phosphatized with powder coated finish and surface mounted type.
 - Detachable plate with Knock out holes shall be provided at the top/bottom of board. Complete board shall be factory fabricated and pre-wired in factory ready for installation at site.
 - The DB shall be indoor cubicle type, wall mounted dust and vermin proof suitable for 3 phase, 4-wire, 415V, 50Hz AC supply system.
 - The sheet steel enclosure / angle / channel used in the fabrication of distribution board shall be provided with double coating of red oxide and final coating of light grey powder coated paint.
 - Minimum two earth terminals shall be provided in the DB. All sheet steel section shall be electrically connected with earth.
 - DB shall be mounted on wall/ pillar.
 - The MCBs shall be of make as per List enclosed and shall be got approved from CPM/System/ADI before supply.
 - The breaking capacity of MCBs should not be less than 10KA & 'C' curve
The SDB shall be comprised with following switch gears—
- (a) Incoming circuit – 1 x 63 A 4-pole MCB
Outgoing circuit – 6 x 32 A DP MCB
- (b) Incoming circuit – 1 x 32 A 4-pole MCB
Outgoing circuit – 6 x 32 A DP MCB

PIPE/ PLATE EARTHING & EARTH WIRE & 8 SWG WIRE (Item No. 34, 35)

(A)PIPE EARTHING

At each location the tenderer shall supply the material and erect 'pipe earthing stations' one each for individual end termination on both the ends of the cable laid and other locations as required. Contractor should adopt new technology method to dig earth pit as per drawing.

The GI pipe for the earthing electrode shall be 50 mm nominal bore dia. Medium class as per IS :1239 & 3.0 m in length and shall be of make as per list enclosed and shall be got approved from CPM/SYSTEM/ADI before supply.. Proper connecting arrangement with clamp, G.I. nut and bolts of 12mm size shall be provided at the top end of the pipe-earthing electrode, by the tenderer.

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The earthing wire shall laid from end terminations to earthing electrode through G.I. pipe along with the cables. Properly supported and clamped. The earthing electrode pipe shall not protrude more than 250 mm above ground level. The end sealing G.I .cap shall be provided at the top of the pipe-earthing electrode. An earthing chamber as per drawing shall be provided at the each earthing electrodes. Earth resistance of each and every earth station shall be recorded with date in presence of Railway representative and painted on the earth chamber. Details of earth resistance recorded should be submitted jointly signed by contractor and NHRCL/WR representative. Payment will be arranged only after joint verification & painting.

The contractor shall supply and connect the earth electrode by earth wire of 2 Nos. 8 SWG with PVC sleeve insulated & connect G.I. wire between each point to be earthed and individual earthing station. The G.I. earthing wire ends shall be clamped between two G.I. washers of sufficient size and properly tightened with G.I. nuts and bolts of 12mm size. Earth wire should be drawn through the pipe laid for cable protection.

G.I. STRIP FOR CONNECTING EARTHING Item No. 36

Contractor has to supply and provide GI strip size- 25 x 6 mm with PVC sleeve for providing interconnections for different panels and transformers to earthing. GI strip should be connected with nuts/bolts if required and not by welding.

EXCAVATION OF NORMAL SOIL (Item No. 21)

A pit/trench of required size of width and depth from the normal ground level in soil (except Rock) shall be made by the contractor for the purpose of identification of utilities / cable laying by HDD/push through method. After laying the cable/identification of utilities, refill the same by riddle soil in the pit/trench. After doing this the pit/trench can be filled up with soil available thereby. If any damage done, contractor will make good the cost of damage as decided by NHRCL/railway. If any hard /stony soil, Contractor should adopt new technology method as per scope of work. Qty will be measured in Cubic meter.

EXCAVATION OF HARD SOIL (STONE/ROCK/RCC/PCC) (Item No.-22):-

A pit/trench of required size of width and depth from the normal ground level in all type of hard soil (Stone/Rock/RCC/PCC etc) shall be made by the contractor for the purpose of identification of utilities/ cable laying by push through method. After laying the cable/identification of utilities, refill the same by riddle soil in the pit/trench. After doing this the pit/trench can be filled up with soil available thereby and resurface the same. If any damage done, contractor will make good the cost of damage as decided by railway.

If any hard /stony soil, Contractor should adopt new technology method as per scope of work. Qty will be measured in Cubic meter.

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Refinishing of trench with PCC on top (Item No. 20): -

A pit/trench of on platform or on PCC surface shall be refinished with PCC on top level to match existing level with dimensions of 700 x 100 x 1000mm.

PCC grade should be approved by NHSRCL.

STEEL TUBULAR POLE-7.5 Mtr (Item No -24)

The contractor shall have to supply, installation, testing and commissioning of 7.5 mtrs. steel tubular pole for platform lighting. The steel tubular pole shall be swaged type conforming to IS 2713 Part -II-1980 designation 410 SP-9 & steel tubes for structure purpose conforming to IS:1161/1979.

Steel Tubular swaged pole manufactured on automatic pole swaged plant tapered forced in and shrunk with welding. Outside surface shall be anti-corrosive red painted. The embedded Portion is painted internally and externally with Black Bituminous Paint. Pole is supplied with 300x300x 5 mm thick base plate. Schedule item also includes erection of poles.

The bottom portion of the pole shall be 4.5 meter in length, 139.7 mm outer dia, 5.4 mm wall thickness, 125 mm Nominal bore, Heavy duty.

The middle portion of the pole shall be of 1.5 mtr in length, 114.3mm outer dia, 3.65mm wall thickness, 100 mm Nominal bore, Light duty.

The top of the pole shall be 1.5 mtr. in length, 88.9mm outer dia and 3.25mm wall thickness, 80 mm Nominal bore, light duty.

The pipe used for the poles shall be of ISI mark. The approximate weight of the pole will be 110 kg. Permissible tolerance in wall thickness is $\pm 10\%$, in overall length of pole ± 30 mm & in weight $\pm 7.5\%$.

Note:- Inspection of poles shall be offered by contractor at the manufacturer's premises at his own cost before supply at site, if required.

ERECTION OF THE TUBULAR POLE

For carrying out the foundation of poles about 1.25 mtr portion of pole shall be firmly buried in the foundation with all around concreting with cement concrete of the ratio 1:3:4, 500 mm dia & muffing size -300 mm dia x 0.5 mtr height above Ground level.

The contractor shall arrange cement, sand, concrete & water. Poles shall be provided with double coating of red oxide and final coating of Aluminum paint and black paint up to two meters height of muffing. Ensure pole-to-pole Earth continuity through Armouring / earth wire. Each end poles on the platform shall be connected to earth electrode.

Connection to the street light fittings from Jn. box shall be given through inside the pole with 1.0 sq mm flexible, 3-core, multi strand copper conductor, PVC insulated & sheathed wire.



JUNCTION BOXES (Item No. 25)

The contractor shall have to supply, installation, testing and commissioning of Jn. boxes of SINTEX, NATIONAL OR SIMILAR for connecting the incoming & out going cables and connecting wire of street lights. Jn. boxes shall be complete with suitable connectors and fuse unit for streetlight. Complete unit shall be mounted on the pole/wall/Pillars by necessary hardware Terminal strip, Cable glands, clamps etc.

Make & Model as per list enclosed and shall be got approved from CPM/SYSTEM/ADI before supply.

LED 20 to 25 SYSTEM WATT STREET LIGHT LED FITTING – (Item No. 32)

The contractor shall have to supply, erection, testing & commissioning of minimum (20-25) System Watt, surface mounted LED tube light fitting complete with driver and all other accessories. Operating voltage range-160-270 V, 50 Hz, Minimum lumen output shall not be less than 85 lumen / watt. The fitting housing shall be made of powder coated aluminum pressure die cast & Heat resistance toughened glass / poly- carbonate cover with IP 65 protection. The driver card shall with stand 1.5 KV +/-3% Surge protection, THD<10%, Burning Hours 50,000.

Contractor shall also submit the test certificate of LM-79 for certified lumen issued from UL/ any NABL approved laboratory and LM-80 test certificate for certified burning hours along with supply of material.

The LED fitting shall be Philips Model No. BRP409 , Crompton model No. LSTO-25-CDL or WIPRO model No.LR02-291-XXX-57-XX OR HPL Model No- HPLLEDST-2560 OR similar make as per list enclosed.

LED street light fitting should be mounted on wall/pole with mounting arrangement. Contractor shall provide suitable bracket of suitable size for the fixing of fitting. The connection of the light fitting shall be done by flexible, 3-core, multi strand copper conductor, PVC insulated & sheathed wires

Note:-The make & model of fitting along with manufacturer's catalog, LM-79, LM-80 test certificate shall be submitted by the contractor & got approved by CPM/System, Ahmedabad before supply at site.

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LED 37 to 45 SYSTEM WATT STREET LIGHT LED FITTING - (Item No. 33)

The contractor shall have to supply, erection, testing & commissioning of minimum (37-45) System Watt, surface mounted LED tube light fitting complete with driver and all other accessories. Operating voltage range-160-270 V, 50 Hz, Minimum lumen output shall not be less than 85 lumen / watt. The fitting housing shall be made of power coated aluminum pressure die cast & Heat resistance toughened glass / poly- carbonate cover with IP 65 protection. The driver card shall with stand 1.5 KV +/-3% Surge protection, THD<10%, Burning Hours 50,000.

Contractor shall also submit the test certificate of LM-79 for certified lumen issued from UL/ any NABL approved laboratory and LM-80 test certificate for certified burning hours along with supply of material.

The LED fitting shall be Philips Model No. BRP022, Crompton model No. LSTO-45-CDL or WIPRO model No.LR16-411-XXX-57-XX OR HPL Model No- HPLLEDST-4060 OR similar make as per list enclosed.

LED street light fitting should be mounted on wall/pole/gantry with mounting arrangement. Contractor shall provide suitable bracket of suitable size for the fixing of fitting. The connection of the light fitting shall be done by flexible, 3-core, multi strand copper conductor, PVC insulated & sheathed wires

Note:-The make & model of fitting along with manufacturer's catalog, LM-79, LM-80 test certificate shall be submitted by the contractor & got approved by CPM/System, Ahmedabad before supply at site.

SURFACE WIRING**LIGHT /FAN/CALL BELL & 6AMP MODULAR PLUG POINT (ITEM NO.4 & 5)**

The contractor shall have to supply, installation, testing and commissioning of Light, fan, call bell & 6 amp plug point with modular switch & plug and carry out wiring from switch board to load/ ceiling rose point in PVC casing / capping of minimum 25 mm size or more size wherever required in PVC casing / capping or PVC conduit pipe. For light, fan, call bell point & 6 A plug point 1.5 sqmm multi-strand single core FRLS-PVC insulated 1.1kv grade Copper conductor wire for phase & neutral and 1.5sqmm multi-strand single core FRLS -PVC insulated 1.1kv grade copper conductor wire with ISI mark for internal earthing in the same casing / capping/conduit.

The contractor shall have to supply and provide modular type Molded Poly Propylene switch boards for points and plug-socket etc.

Rate of the point wiring shall include supply, erection and commissioning of standard size board box, modular switches with all accessories as specified, lamp holders / ceiling rose, adopter / lamps etc. with matching colour. There shall be sufficient space on switchboard to provide modular fan regulator & modular plug socket.

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The modular switch board, modular switches, modular sockets & modular bell switch: Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply.

16/6 A MODULAR PLUG POINT (Item No. 11)

The contractor shall have to supply, installation, testing and commissioning of modular type plug point with material and provide 16/6A modular plug socket & 16A modular switch with modular type Molded Poly Propylene board in surface manner with 4.0 sq mm FRLS-PVC insulated multi strand copper wire for phase and neutral and internal earthing in 25 mm size PVC casing / capping or PVC pipe (MMS). Contractor should supply modular plug socket and modular switch separately after that erected on board. Measurement of wiring up to 16/6 Amp plug point shall be given separately from 4.0 Sq mm sub main item.

The modular switches & modular sockets- Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply.

MAIN-SUB MAIN 2.5 SQMM Item No -6

The contractor shall have to supply, installation, testing and commissioning of main & sub-main circuit for phase, neutral and internal earthing from SDB to switch board & switch board to switch board shall be carried out in PVC casing / capping or PVC pipe (MMS) with 2.5 sqmm (as given in schedule) multi-strand, FRLS-PVC insulated 1.1 KV grade single core copper conductor wire.

Make- as per List enclosed and shall be got approved from CPM/System/ADI before supply.

MAIN-SUB MAIN 4.0 SQMM (Item No -8)

The contractor shall have to supply, installation, testing and commissioning of main & sub-main circuit for phase, neutral and internal earthing from SDB to switch board & switch board to switch board shall be carried out in PVC casing / casing or PVC conduit pipe with 4.0 sqmm (as given in schedule) multi-strand, FRLS-PVC insulated 1.1 KV grade single core copper conductor wire.

Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply.

MAIN-SUB MAIN 6.0 SQMM (Item No - 9)

The contractor shall have to supply, installation, testing and commissioning of main & sub-main circuit for phase, neutral and internal earthing from SDB to switch board & switch board to switch board shall be carried out in PVC casing / casing or PVC pipe (MMS) with 6.0 sqmm (as given in schedule) multi-strand, FRLS-PVC insulated 1.1 KV grade single core copper conductor wire.

Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply.

MAIN-SUB MAIN 10.0 SQMM (Item No - 10)

The contractor shall have to supply, installation, testing and commissioning of main & sub-main circuit for phase, neutral and internal earthing from SDB to switch board & switch board



to switch board shall be carried out in PVC casing / casing or PVC pipe (MMS) with 10.0 sqmm (as given in schedule) multi-strand, FRLS-PVC insulated 1.1 KV grade single core copper conductor wire.

Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply.

CEILING FAN (ITEM NO. 29 & 30)

The Contractor shall have to supply, transport and provide the ceiling fan at different locations as decided by NHSRCL. Necessary arrangement for anchoring with suitable length of down rod of 20 mm dia seam less MS pipe or as received with fan if length is suitable, with nut, bolt & split pin to be provided by the contractor to maintain height of ceiling fan not less than 2.4mtr from the room floor.

The connection of the ceiling fan in buildings shall be done by flexible, 3-core, multi-strand copper conductor from catenary/ ceiling rose.

Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply.

FAN REGULATOR (ITEM NO. 31)

The contractor shall have to supply, installation, testing and commissioning of modular step type hum-free fan regulator of 100 W on existing switchboard.

The modular fan regulator- Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply.

WIRING OF 6 Amp. PLUG POINT (Item No. 12)

The contractor shall have to supply of material and provide modular type 04 nos. 6A socket with 6A switch separately with suitable modular box, front plate with accessories in concealed/casing capping manner with 2.5 sq mm FRLS-PVC insulated multi strand copper wire for phase and neutral and 1.5 sqmm FRLS wire for earthing in 25 mm size PVC conduit pipe/casing capping.

The switches & sockets- Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply.

CONCEALED WIRING OF MAIN-SUB MAIN 4.0 SQMM Item No -7

The wiring for the main & sub- main circuit for phase, neutral and internal earthing from SDB to switch board & switch board to switch board shall be carried out in concealed manner with 4.0 sqmm (as given in schedule) multi-strand, FRLS-PVC insulated 1.1 KV grade single core copper conductor wire in minimum 25 mm or more size PVC conduit pipe. Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply.

CONCEALED WIRING OF MAIN-SUB MAIN 6.0 SQMM Item No -9

The wiring for the main & sub- main circuit for phase, neutral and internal earthing from SDB to switch board & switch board to switch board shall be carried out in concealed manner with 6.0 sqmm (as given in schedule) multi-strand, FRLS-PVC insulated 1.1 KV grade single core

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copper conductor wire in minimum 32 mm or more size PVC conduit pipe. Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply.

CONCEALED WIRING OF MAIN-SUB MAIN 10.0 SQMM (Item No -10)

The wiring for the mains for each three phase, neutral & earth wire (total five wires) from main DB to SDB shall be carried out in concealed manner with 10.0 sqmm (as given in schedule) multi-strand, FRLS-PVC insulated 1.1 KV grade single core copper conductor wire with in minimum 32 mm or more size PVC conduit pipe. Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply.

EXHAUST FAN (Item No. 16)

Contractor shall have to supply, install test and commission the 300 mm sweep, heavy duty metal body exhaust fan. Make- As per List enclosed and shall be got approved from CPM/System/ADI before supply. Contractor should provide Wire mesh on outside of exhaust fan as safety measure.

The connection of the exhaust fan shall be done by flexible, 3-core, multistrand copper conductor, PVC insulated & sheathed wires.

LT STRAIGHT THROUGHJOINTS (Item No. 71 & 78)

The contractor shall supply & provide heat shrinkable straight through jointing kits for 1.1KV grade suitable to 3.5/4 core up to 70 & 120 sqmm LT aluminum cable, manpower & transportation to carry out the repairing of faulty LT cable. The straight through joints shall be of M-seal (3M), Dension or Raychem or similar as per List enclosed and shall be got approved from CPM/System/ADI before supply.

All the materials and man power for repairing work along with transportation shall be arranged by the contractor. Digging of pit for cable repair and refilling shall also be done by the contractor.

LT CABLES TERMINATION (Item No. 57 & 63)

The contractor shall supply & provide single compression gland for 1.1KV grade suitable to 3.5/4 core up to 25 & 300 sqmm LT aluminum cable, manpower & transportation to carry out the repairing of faulty LT cable. List enclosed and shall be got approved from CPM/System/ADI before supply.

All the materials and man power for repairing work along with transportation shall be arranged by the contractor. Digging of pit for cable repair and refilling shall also be done by the contractor.

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INSTALLATION OF 1.5 TON SPLIT AC (ITEM NO.27)

The contractor shall transport, install, test and commission 1.5 ton capacity split AC unit (stand, copper tubing, drain pipe, power supply cables, plug top etc.) at suitable location as decided by site engineer. (The AC unit will be supplied by NHSRCL). All the tools and man power for installation of AC shall be arranged by the contractor. AC unit shall be supplied by NHSRCL.

20A PLUG, SOCKET & MCB with Metal Enclosure (Item No. 28):-

The contractor shall have to installation, testing and commissioning of 20 A plug point with material and provide 20A metal clad plug socket with top and 20A DP MCB, 10 KA with metal box & 4 sq mm FRLS-PVC insulated multi strand copper wire for phase and neutral and 4.0 sq mm PVC insulated multi strand copper wire for internal earthing in 32 mm or more size PVC casing / capping. Measurement of wiring up to 20 Amp plug point shall be given separately from 4.0 Sq mm sub main item. This point used for Geyser & Air conditioner.

The 20A Plug socket, 20 A DP, 10KA MCB with metal box shall be of make as per list enclosed and shall be got approved from CPM/System/ADI before supply. Socket shall be suitable for Air conditioners, Geyser & water coolers etc.

SURFACE MOUNTED 18 W- 20 W PORCH LED LIGHT FITTING - (Item No. 14)

The contractor shall have to supply, erection, testing & commissioning of 18 System Watt, LED type surface mounted light fitting complete with driver and all other accessories. Input operating voltage 230V, 50 Hz.

Mounting arrangement including hardware shall be provided by the contractor. The connection of the light fitting shall be done by flexible, 3-core, multistrand copper conductor, PVC insulated & sheathed wires.

Note:-The make & model of fitting along with manufacturer's catalog shall be submitted by the contractor & got approved by CPM/System, Ahmedabad before supply at site.

18 W 4 FEET LED TUBELIGHT FITTING - (Item No. 15)

The contractor shall have to supply, erection, testing & commissioning of 18 System Watt, LED type tube light complete with driver and all other accessories. Input operating voltage 230V, 50 Hz.

Mounting arrangement including hardware shall be provided by the contractor. The connection of the light fitting shall be done by flexible, 2/3-core, multistrand copper conductor, PVC insulated & sheathed wires.

Note:-The make & model of fitting along with manufacturer's catalog shall be submitted by the contractor & got approved by CPM/System, Ahmedabad before supply at site.

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RECESS MOUNTED 36-38 W (2X2 Sq feet) LED FITTING - (Item No. 13)

The contractor shall have to supply, erection, testing & commissioning of 36-38 System Watt, 2x2 sqft LED type recess mounted LED fitting complete with driver and all other accessories. Input operating voltage 230V, 50 Hz.

Contractor shall also submit the test certificate of LM-79 for certified lumen and LM-80 test certificate for certified burning hours along with supply of material.

Mounting arrangement including hardware shall be provided by the contractor. The connection of the light fitting shall be done by flexible, 3-core, multistrand copper conductor, PVC insulated & sheathed wires.

Note:-The make & model of fitting along with manufacturer's catalog shall be submitted by the contractor & got approved by CPM/System, Ahmedabad before supply at site.

Technical specification for Supply of various XLPE Cables (item no. 43 to 50)

The contractor have to supply of 'ISI marked', LT XLPE insulated & PVC sheathed, armoured, 1.1 KV grade, aluminum cables of sizes as mentioned in schedule of rates & quantity and confirming to IS: 7098(part-1:1988) or latest.

Make- Polycab, Asian, Nicco, Finolex, Bharatcab, RR Kabel, Havells, Avocab, L&T, Anchor, Pyroflex, Paragon, CCI, HPL make's only.

In case of full drum length of the cable, the contractor has to offer for testing and inspection of cable at manufacturer's works for which all arrangement i.e. fixing of time & date with manufacturer, arranging testing instruments, etc. shall have to be made by contractor at his own cost. The cable shall be tested in accordance with IE rules and relevant IS & standard code of practice.

Technical specification for Supply of various XLPE Cables (item no. 43 to 50)

The contractor have to supply of 'ISI marked', LT XLPE insulated & PVC sheathed, armoured, 1.1 KV grade, aluminum cables of sizes as mentioned in schedule of rates & quantity and confirming to IS: 7098(part-1:1988) or latest.

Make- Polycab, Asian, Nicco, Finolex, Bharatcab, RR Kabel, Havells, Avocab, L&T, Anchor, Pyroflex, Paragon, CCI, HPL make's only.

In case of full drum length of the cable, the contractor has to offer for testing and inspection of cable at manufacturer's works for which all arrangement i.e. fixing of time & date with manufacturer, arranging testing instruments, etc. shall have to be made by contractor at his own cost. The cable shall be tested in accordance with IE rules and relevant IS & standard code of practice.

Technical specification for CAT-6 cable (Item No.97) :-

UTP CAT-6 cable of make D-Link , Nortel, Plexonics, Amp, Molex or Lucent. Make with identification mark /ferrules etc as per Specification .



4 Pair Twisted Cable.
Tangle free cable pack in pull free corrugated box.
Support for Fast and Gigabit Ethernet, IEEE 802.3/5/12, Voice,
ISDN, ATM 155 & 622Mbps.
23 AWG Annealed bare solid copper.

Technical specification for RJ-11 & 45 (Item No. 100):-

RJ-11 & 45 Connectors' make D-link, Molex, Systimax or Krone good quality of material.

Technical specification for 25mm HDPE (Item No. 98):-

25 mm dia. HDPE pipe (TEC spec. No. G/CDS-08/02, Nov'04 or latest) with accessories on wall or structure / in trench etc. for drawing of CAT-6/OFC cable/ power cable in the same to suit. All materials for jointing, fixing, clamping of HDPE pipe, cutting of masonry wall at the entry of room, repairing of masonry wall, cement plastering at per site requirement are to be supplied by contractor.

Fiber optic fiber splice straight joint enclosure (SJC) (Item No. 94):-

2x24 fiber optic fiber splice straight joint enclosure (SJC) complete with all accessories as per RDSO/SPN/TC/68/2014, Rev.3 or latest specs for 24 fiber OFC cable with latest amendment with all accessories.

6 quad x 0.9 mm dia cable(item no. 90):-

6 quad, 0.9 mm dia jelly filled underground cable as per RDSO spec no. IRS: TC30/2005(ver.1) with Amendment no. 5 or latest.

Supply of PIJF cables (item no. 85,86, 87 & 88) :-

PFU jelly filled armoured cable as per RDSO spec no.IRSTC: 41/97 with amendment no. 2 or latest

Thermo shrinkable joint kit [Item No. 95]:-

Thermo shrinkable joint kit as per RDSO Spec. No. IRS/TC 77/2012 Rev-3 Amd.-1&2 or latest straight through joints suitable to 6 quad cable of Spec. No. IRS TC -30/2005, Ver-1, Amd-4 or latest Make Western Cablex & General Auto Electric.



Thermo shrinkable joint kit [Item No. 91 to 93]:-

Thermo shrinkable joint kit as per RDSO Spec. No. SPN/TC 57/2015 Rev-1 or latest suitable to 5/10/20/50/100 pair PIJF U/G telecom cable of spec. No. IRS TC -41/97, Amd-2 or latest. Size of the cable will be advised by consignee in charge and conforming to as per Technical Specifications Make Western Cablex & General Auto Electric.

Procedure for Jointing:

Before jointing is commenced all safety precautions like isolation, discharging, earthing etc. shall be taken to ensure that the cable would not be in-advertantly charged from live supply. Metallic armoured and external metallic bonding shall be connected to earth. Where cable is to be jointed with the existing cable the sequence should be so arranged, as to avoid crossing of cores while jointing.

20mm PVC (Item No. 105):-

20 mm PVC pipe ISI mark with all accessories i.e. Bend (L, T& band) colure white /cream /Gray.

Half Round RCC pipes [Schedule "A" Item No.54] :-

Half Round RCC pipes & collars of 150 mm internal dia (2 meter long) along with collars as per IS No. 458/2003 of NP type (1 meter x 2 Nos.)

19" 9U Rack (Item No.99) :-

- a) Floor Standing Rack shall be of Size- 9 U.
- b) The 19" Rack structure should be made of 1.6 mm thick Mild Steel
- c) Each Rack should have 1-No Front- Glass- Door of 4 mm thick covering entire length of the rack that should be fitted / pasted to Front -Door- Frame by using silicon sealant. The material thickness of the Front & Rear -Door Frame should not be less than 0.9 mm with a capability of opening up to 180 degree approximately with locking arrangement, detachable & interchangeable hinges. Front & Rear Door should have Poly Urithane Gasketing. Rack should have Locks on all sides, which can be unlocked and open by single key.
- d) The thickness of Top-Cover & Bottom- Base material should be at least 1.2 mm. The Top Cover should have Cable -Entry holes of size 40 mm in diameter with Rubber Rings and suitable Gland Closure Plates.

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- e) The Side Panels of the Rack should be detachable having ventilated fins flush fitted with Air filters up to 1/3 rd height to avoid of dust entry.
- f) The Power Distribution Channel (AC) should have 2 Nos. in 9U with switch of 5 Pin Type and 5 Amps capacity with common Fuse and Indicator. All the Sockets must be Industrial quality either LEGUARD or CRABTREE or ANCHOR or ZODIAC Make. Suitable capacity Mains 3 Core Cable of 3 Mts. Length with 15 Amp Mains Plug must be given with this box. Total quantity for this item is 2 -Nos. per Rack. The Socket should be mounted vertically on PVC base at back side of the Rack.
- g) Each Rack should have Heavy Duty Castors except 9U consisting of 2 -Nos. with Brake and 2- Nos. without Brake. The castors are to be mounted on a separate Plate.
- h) Each Rack should have 4- Nos. Cooling Fans of Hicool Make or superior of 230 V AC Mains Rating with supply Cable and Plug, fitted directly inside the Top Cover.
- i) PVC Cable Channel of size 45 (H) X of full rack length, in 9U. One No of 19" Cable Manager with 5- Hooks for Power Cable is required with each Rack. Cable Guides, Cable Ties, ties Holders cable Markers should be supplied for easy identification and lacing of Cable.
- j) 1- No. Copper Earthing- Bar/Strip with Tin Plating of Cross Section 1" X ¼" to be provided horizontally on rear side of the rack full length of 19" Width with suitable tapping to be supplied with each Rack.
- k) The Rack structure should be fully Powder Coated with combination of Dark & Light Grey shade. Doors-Frames should be in light Grey shade.
- l) Front Panel Mounting Hardware (One set consisting of 1 No Cup Washer, 1- No Cage Nut, and 1- No M6 Screw) set, 20 -Nos. per Rack is required.
- m) MCB Panel (without MCB) for housing of minimum 5 MCB shall be available at the top of the Rack, with +ve and -ve bus bar for provision of DC Power Supply.
- n) The Rack should be Valrack/ APW President / Rittal /D-link make.

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LIST OF APPROVED MAKES

- 1) **Air Circulators** - C.G. Usha, GEC, Alfa, Unique, Almonard, Inova, Khetan, Bajaj, Havells,
- 2) **Air Circuit Breaker** – L&T, GE, Siemens, Indoasian, Havells, ABB, Crompton Greaves, Schneider.
- 3) **Bulk Head Fitting** – Philips, C.G, Lumex, Bajaj, Wipro
- 4) **Bracket Fan** – C.G. Usha, GEC, Alfa, Unique, Almonard, Bajaj, Havells
- 5) **Blower Fan Motor** – ABB, C.G, Hind motor, Siemens
- 6) **Ceiling Fan Decorative 4 Blades** – Usha, Crompton Greaves, Orient, Bajaj, Havells, Anchor.
- 7) **Call Bell** - Cona, Anchor. Leader, Precision, Veto, Havells.
- 8) **Copper Wire** – Polycab, Asian, Nicco, Finolex, Bharatcab, RR Kabel, Havells, Avocab, L&T, Anchor, Philco, Pyroflex, Paragon, CCI, HPL, Bentec, Fortgloster.
- 9)
- 10) **LT XLPE cable:**
- 11) **Casing Caping/conduit** – Prestoplast, Precision, Modi, Volex, Press Fit, Premium
- 12) **D.P. Switch with fuse** - Anchor, Leader, Cona, Harison, Havells, Veto, C&S, L&T, GE, Indo-Asian.
- 13) **ERW Pole/G.I. POLE** – Crompton Greaves, Bajaj, Philips
- 14) **Exhaust/Pedestal Fan** - Crompton Greaves, Usha, GEC, Alfa, Unique, Almonard, Inova, Khetan, Havells, Bajaj.
- 15) **Electronic Ballast** - Philips, Crompton Greaves, Bajaj, Wipro, GE, HPL

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- 16) **Electronic Fan Regulator** – Anchor, Roma, Rider, Jainex, MI, Cona, Legrand, Leader, Crebtree, MK, Ave, Philips, Havells.
- 17) **FRP cable looping Box** – Sintex, Ercon, Indo Asian.
- 18) **Flat submersible cable** – Polycab, Asian, Nicco, Finolex , Bharatcab, Avocab, HPL, Bentec.
- 19) **G.I. Pipe** - Zenith, Prakash Surya, Jindal, TATA, Swastika, Asian
- 20) **HOLDERS, Ceiling rose, switches-** Anchor, Leader, Cona, Harison, Indo Asian, Legrand, MK, Crebtree.
- 21) **Insulating varnish** - Dr.Beck
- 22) **Luminaries with lamps / CFL-** Philips, C.G, Bajaj, Wipro, GE, HPL, Havells, Oreva, Shakti, Triveni, Osram.
- 23) **Lead acid battery** – Amar Raja, Exide, CSB, Hitachi, Okaya, Panasonic
- 24) **LED LUMINAIRE** – Goldwyn, Vin, HPL, dewlite, CG, Technovision, Bajaj, Philips, Wipro.
- 25) **LED** - Osram, CREE, Edison, Seol, Philips, Nichia, Lumilide, Avago.
- 26) **Ladder:** Eleco, Summer, Stacke & Mover, Heera, Balaad, Eshakdada Bambuwala,
- 27) **MCCB** – L & T, GE, Siemens, HPL, Havells, Indo Asian, Legrand, Schneider, ABB, C&S.
- 28) **MCB, DB, ELCB, RCCB, RCBO** – MDS, GE, Indo Asian, Indokupp, HPL, Havells, Legrand, C&S, Oreva, Bentec, L&T.
- 29) **Modular switch & socket**, Anchor / Roma, Cona, Leader, Cabtree, MK, Legrand.
- 30) **Submersible Pump sets** – Kirloskar, C.G, Siemens, NGEF, KSB, Calama, Amrut Shriram, Lubi, KDS, Taxmo, Shakti

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- 31) **Plug/Sockets 6/16 Amp** – Anchor, Cona, Leader, Roma, Havells, Legrand, Indo Asian, Crebtree, MK, Precision, Veto.
- 32) **Paints** – Asian, Nerolac, Dulex, Shalimar
- 33) **Ray Roll Socket**- MDS, GE, Indo Asian, HPL, BCH, C&S, Jainson, Ajmera, CG, Havells.
- 34) **Battery Charger**: Suresh Electricals, Usha rectifier, Hind Rectifier, National Engineering Corporation, Excel Electrical, Equipment Control.
- 35) **Power / Distribution Transformer**: AREVA, ABB, EMCO, Crompton, BHEL, Voltamp, Kirloskar, IMP, Bharat Bijlee, NGEF, Voltas, GEC, Vivekanand, CG, Western Electric, Tesla, RTS, National.
- 36) **Step down transformer**: Suresh, Urja, Entonson Electrical. Equipment control, Supreme.
- 37) **SFU/TPN/Change Over switch** – L & T, ABB, Siemens, GE, HPL, Schnider, Legrand, Indoasian, CG, C&S, EE, Havells.
- 38) **SVR/stabilizer** – Afcoset.
- 39) **Spot light**- Philips, Bajaj, C.G, Wipro.
- 40) **Surge Suppressor** – Anchor, MDS, Rider,
- 41) **Telescopic ladder**- Eleco, summer, Stacke & Mover, Heera, Balaad
- 42) **UPS Battery** – Amar Raja, Exide, CBS, Panasonic, Hitachi, Yuasa
- 43) **Vinyl for Glow Sign Board** – L.G, 3M, Penaflex, Graphictack
- 44) **Measuring Instrument/Voltmeter/Ammeter** – AE, IMP, Motwani, MECO, Trinity, Tosniwal, Jaipur meter, Simco, Macco, Ruttonsha, Simpson, Hitachi, L&T, Baroda meter, Havells.
- 45) **Water Heaters**- Spherehot, Venus, Bajaj, Recold, Voltas, Almonard, Ditz.



- 46) VCB: AREVA, Siemens, ABB, Crompton Greaves, Jyoti, MEI, Beicco lawrie, Voltas, BHEL
- 47) Phase Selector Switch: KAYCEE, Thakor, L&T, Sulzer.
- 48) Instrument Transformer (CT/PT): Ashmor, C&S, L&T, MECO, Virat, Kuppa, AE.
- 49) Indication Lamp: L&T, Siemens, C&S, Teknik.
- 50) Relay: Areva, Siemens, ABB, MEI, CG, Jyoti, BHEL, L&T, Voltas.
- 51) LT/HT end termination Box: Raychem, Denson, M-Seal.
- 52) Plastic Switch board : Halison, Presto teak, Precision.
- 53) Industrial Plug Socket: BCH, ABB.
- 54) Pre-cooling plug & socket with MCCB -Bentec, BCH, EE.
- 55) UPVC pipe: Parixit, Swastik.
- 56) XLPE power

NOTE : If there is any clarification or deviation in Technical Specification against Bill of Quantity is required the decision of Engineer-in-charge will be final.

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Bill OF Quantity (BOQ)

S.No.	Item Description	Item Qty	Unit	Rate	Amount
1	Supply, installation, testing & commsioning of Main panel 2 x 150 Amp MCCB O/G having 8 x 63 Amp 4 pole, MCB, 6 x 32 Amp. MCB SP with ammeter and voltmeter	1	Nos.	82228	82228
2	Supply, installation, testing & commsioning of Sub distribution board 1 x 63 Amp MCB and O/G 4 - 6 x32 Amp	2	Nos.	7353	14706
3	SITC of distribution board having 32 Amp DP MCB incoming and O/G 6 x 06-32 Amp of approved make	20	Nos.	2164	43280
4	SITC of surface wiring of light, fan, stair light & call bell points with modular switch and board for 3 nos. (1.5 sq.mm FRLS PVC insulated multistrand copper wire) PVC casing & capping/ PVC conduit and necessary accessories of approved make.	300	Nos.	362	108600
5	SITC of surface wiring of plug point 6 Amps with modular switch in existing board (1.5 sq.mm FRLS PVC insulated multistrand copper wire) PVC casing & capping/ PVC conduit and necessary accessories of approved make.	300	Nos.	119	35700
6	SITC of surface wiring of sub main from board to board and room to room with 3 nos. 2.5 sq.mm FRLS PVC insulated multistrand copper wire in PVC casing & capping/ PVC conduit and necessary accessories of approved make.	3000	RM	71	213000
7	SITC of surface wiring of sub main from board to board and room to room with 3 nos. 4 sq.mm FRLS PVC insulated multistrand copper wire in PVC conduit and necessary accessories of approved make.	3000	RM	126	378000
8	SITC of surface wiring of main to sub main or from board to board and room to room with 3 nos. 4 sq.mm FRLS PVC insulated multi strand copper wire in PVC casing & capping and necessary accessories of approved make.	2000	RM	95	190000
9	SITC of surface wiring of sub main from board to board and room to room with 3 nos. 6 sq.mm FRLS PVC insulated multi strand copper wire in PVC casing capping /conduit and necessary accessories of approved make.	2000	RM	147	294000
10	Supply of material & providing main/sub main wiring with 03 nos. (phase, neutral & earthing) 10	1000	RM	324	324000



	sq.mm FRLS, ISI mark copper wire with PVC conduit of approved make.				
11	SITC of surface wiring of modular plugpoint 16/6 with modular switch on separate board by 3 nos. 4.0 sqmm FRLS PVC insulated multistrand copper wire with PVC casing & capping and necessary accessories of approved make.	150	Nos.	506	75900
12	SITC of separate switchboard having 4 nos. 6 Amps multi pin socket with separate individual 6 Amp switch for each socket for laptop/PC work and carry out wiring with 2.5sqmm wires for phase and neutral and 1.5sqmm black wire for earthing	50	Nos.	472	23600
13	SITC of 2 x 2 feet 40w LED light panel	20	Nos.	4085	81700
14	SITC of 18- 20 watt LED fitting with 230 volt AC operated drop down type	150	Nos.	1138	170700
15	SITC of 18-20 w 4 feet LED light fittings complete with associated accessories of approved make	150	Nos.	360	54000
16	SITC of exhaust fan 300mm sweep with complete accessories	20	Nos.	2062	41240
17	Transport, Laying, testing & commissioning of power cables in air on wall/pole with suitable clamp /saddles as per technical specifications	2000	RM	19	38000
18	Digging of Cable Trench in Hard soil/RCC/PCC/Road 1000mm Depth x 450mm width and refilling as per specification	1000	RM	476	476000
19	Digging of Cable Trench in normal soil 1000mm Depth x 450mm width and refilling as per specification	2000	Nos.	75	150000
20	Refinishing of trench with PCC on top level for matching with existing surface dimension 700 x 100x 1000mm	200	RM	1314	262800
21	Excavation of all kind of soil (except rock) and filling back the excavated earth as per specification	1000	Cum	132	132000
22	Excavation of hard soil (Stone/Rock/RCC/PCC) and filling back the excavated earth as per specification	300	Cum	852	255600
23	SITC of LT cable route marker	200	Nos.	147	29400
24	SITC of 7.5 mtr long tubular poles	10	Nos.	6873	68730
25	SITC of pole mounted junction box	10	Nos.	575	5750
26	Installation, testing & commissioning of 1.5 ton split AC	10	Nos.	1467	14670
27	SITC of surface wiring in casing capping/PVC conduit of plug point of 20 Amps with 20 Amps DP MCB in metal enclosure for AC from mains.	10	Nos.	1224	12240
28	SITC OF 5 star 1200 mm sweep ceiling fan of approved make with associate accessories	20	Nos.	1748	34960



29	SITC OF 5 star 1400 mm sweep ceiling fan of approved make with associate accessories	10	Nos.	1969	19690
30	SITC of 100w modular electronic fan Regulator of approved make	30	Nos.	699	20970
31	SITC of (20-25) system watt LED street light fitting with complete accessories and wall bracket	5	Nos.	3485	17425
32	SITC of 37- 45 watt IP 65 LED type street light fitting with complete all accessories and wall bracket	5	Nos.	6143	30715
33	Supply, installation, testing & commissioning of GI pipe/plate Earthing	20	Nos.	2878	57560
34	Supply and laying of 8 SWG GI wire	1000	RM	16	16000
35	Supply & erection of 25 x 6 mm GI strip	100	RM	110	11000
36	Transportation, laying, installation & commissioning of power cables of 4c x 10 to 4c x 300 sqmm in existing trench/HDPE pipe.	5000	Mtr.	28	140000
37	SITC of HDPE pipe 160mm Nominal dia 6.2mm thickness as per IS-4984-1995	500	RM	452	226000
38	Laying of HDPE/GI pipe by HDD method under road/rail	300	RM	451	135300
39	Dismantling of different types of existing electrical and telecom cables.	500	RM	31	15500
40	Supply & laying of half round RCC pipe 100mm ID & 1mtr length	1000	RM	50	50000
41	Supply & laying of half round RCC pipe 150mm ID & 1mtr length	1000	RM	57	57000
42	SITC of 4C x 25 sqmm 1.1KV Aluminium armoured XLPE cable of approved make	300	RM	209	62700
43	SITC of 4C x 50 sqmm 1.1 KV Aluminium armoured XLPE cable of approved make	500	RM	322	161000
44	SITC of 4C x 70 sqmm 1.1KV Aluminium armoured XLPE cable of approved make	800	RM	409	327200
45	SITC of 4C x 120 sqmm 1.1KV Aluminium armoured XLPE cable of approved make	1500	RM	722	1083000
46	SITC of 4C x 150 sqmm 1.1KV Aluminium armoured XLPE cable of approved make	500	RM	820	410000
47	SITC of 4C x 185 sqmm 1.1KV Aluminium armoured XLPE cable of approved make	300	RM	992	297600
48	SITC of 4C x 240 sqmm 1.1KV Aluminium armoured XLPE cable of approved make	300	RM	1233	369900
49	SITC of 4C x 300 sqmm 1.1KV Aluminium armoured XLPE cable of approved make	300	RM	1483	444900
50	SITC of 3C x 70 sqmm 11KV Aluminium armoured XLPE cable of approved make	500	RM	1047	523500
51	SITC of 3C x 120 sqmm 11KV Aluminium armoured XLPE cable of approved make	500	RM	1344	672000



52	SITC of 3C x 150 sqmm 11KV Aluminium armoured XLPE cable of approved make	500	RM	1471	735500
53	SITC of 3C x 185 sqmm 11KV Aluminium armoured XLPE cable of approved make	200	RM	1669	333800
54	SITC of 3C x 240 sqmm 11KV Aluminium armoured XLPE cable of approved make	200	RM	1941	388200
55	SITC of 3C x 300 sqmm 11KV Aluminium armoured XLPE cable of approved make	200	RM	2216	443200
56	SITC of 4C x 25 sqmm 1.1 KV Aluminium armoured XLPE cable termination with Single compression Gland & required size Lugs as per requirement	10	Nos.	158	1580
57	SITC of 4C x 50 sqmm 1.1 KV Aluminium armoured XLPE cable termination with Single compression Gland & required size Lugs as per requirement	20	Nos.	499	9980
58	SITC of 4C x 70 sqmm 1.1KV Aluminium armoured XLPE cable termination with single compression Gland & Lugs as per requirement	20	Nos.	572	11440
59	SITC of 4C x 120 sqmm 1.1KV Aluminium armoured XLPE cable termination with single compression Gland & Lugs as per requirement	20	Nos.	673	13460
60	SITC of 4C x 150 sqmm 1.1 KV Aluminium armoured XLPE cable termination with single compression Gland & Lugs as per requirement	20	Nos.	782	15640
61	SITC of 4C x 185 sqmm 1.1KV Aluminium armoured XLPE cable termination with single compression Gland & Lugs as per requirement	20	Nos.	845	16900
62	SITC of 4C x 240 sqmm 1.1KV Aluminium armoured XLPE cable termination with single compression Gland & Lugs as per requirement	20	Nos.	865	17300
63	SITC of 4C x 300 sqmm 1.1KV Aluminium armoured XLPE cable termination with single compression Gland & Lugs as per requirement	20	Nos.	1130	22600
64	SITC of 3C x 70 sqmm 11KV Aluminium armoured XLPE cable termination with single/double compression Gland & Lugs as per requirement	20	Nos.	5352	107040
65	SITC of 3C x 120 sqmm 11KV Aluminium armoured XLPE cable termination with single/double compression Gland & Lugs as per requirement	20	Nos.	6406	128120
66	SITC of 3C x 150 sqmm 11KV Aluminium armoured XLPE cable termination with single compression Gland & Lugs as per requirement	20	Nos.	6406	128120
67	SITC of 3C x 185 sqmm 11KV Aluminium armoured XLPE cable termination with single compression Gland & Lugs as per requirement	20	Nos.	6406	128120



68	SITC of 3C x 240 sqmm 11KV Aluminium armoured XLPE cable termination with single compression Gland & Lugs as per requirment	20	Nos.	6833	136660
69	SITC of 3C x 300 sqmm 11KV Aluminium armoured XLPE cable termination with single compression Gland & Lugs as per requirment	20	Nos.	6833	136660
70	SITC of 4c x 25 sqmm straight through joint kit	10	Nos.	1217	12170
71	SITC of 4c x 50 sqmm straight through joint kit	10	Nos.	1455	14550
72	SITC of 4c x 70 sqmm straight through joint kit	20	Nos.	1495	29900
73	SITC of 4c x 120 sqmm straight through joint kit	20	Nos.	2083	41660
74	SITC of 4c x 150 sqmm straight through joint kit	20	Nos.	2083	41660
75	SITC of 4c x 185 sqmm straight through joint kit	20	Nos.	2393	47860
76	SITC of 4c x 240 sqmm straight through joint kit	20	Nos.	3013	60260
77	SITC of 4c x 300 sqmm straight through joint kit	20	Nos.	3610	72200
78	SITC of 3c x 70 sqmm 11KV straight through joint kit	10	Nos.	5352	53520
79	SITC of 3c x 120 sqmm 11KV straight through joint kit	10	Nos.	6406	64060
80	SITC of 3c x 150 sqmm 11KV straight through joint kit	10	Nos.	6406	64060
81	SITC of 3c x 185 sqmm 11KV straight through joint kit	10	Nos.	6406	64060
82	SITC of 3c x 240 sqmm 11KV straight through joint kit	10	Nos.	6833	68330
83	SITC of 3c x 300 sqmm 11KV straight through joint kit	10	Nos.	6833	68330
84	Supply of 0.5 mm 10 pair PFU jelly filled armoured cable as per RDSO spec no.IRSTC: 41/97 with amendment no. 2 or latest	0.5	KM	97056	48528
85	Supply of 0.5 mm 20 pair PFU jelly filled armoured cable as per RDSO spec no.IRSTC: 41/97 with amendment no. 2 or latest	1	KM	151740	151740
86	Supply of 0.5 mm 50 pair PFU jelly filled armoured cable.as per RDSO spec no.IRSTC: 41/97 with amendment no. 2 or latest	1	KM	275200	275200
87	Supply of 0.5 mm 100 pair PFU jelly filled armoured cable.as per RDSO spec no.IRSTC: 41/97 with amendment no. 2 or latest	1	KM	311640	311640
88	Supply of 24F Armoured optical	1	KM	67240	67240
89	Supply of 6 quad 0.9mm jelly field underground telecom cable as per RDSOIRSTC 30/2005 (ver-I) specification	2	KM	234240	468480
90	Supply and provision of jointing kit of 0.5 mm 20 pair PFU jelly filled armoured cable.	10	Nos.	820	8200



91	Supply and provision of jointing kit of 0.5 mm 50 pair PFU jelly filled armoured cable.	20	Nos.	1304	26080
92	Supply and provision of jointing kit of 0.5 mm 100 pair PFU jelly filled armoured cable.	10	Nos.	1304	13040
93	Supply and provision of Joint enclosure for 24 Fibre for OFC cable	10	Nos.	3657	36570
94	Supply and provision of jointing kit of 6 quad cable.	40	Nos.	2832	113280
95	Splicing of 24 core single mode multi tube OFC cable.	10	Nos.	7569	75690
96	Supply of CAT-6 Cable 1 Box=305	915	Nos.	23	21045
97	Supply & laying of 25 mm dia HDPE pipe with accessories on existing trench/wall & structure for drawing CAT-6/OFC/power cable	1000	RM	31	31000
98	Supply & installation of 19" inch 9 U Rack	5	Nos.	5671	28355
99	Supply of RJ-45 Socket	100	Nos.	10	1000
100	Supply of RJ-11 Socket	100	Nos.	31	3100
101	Laying of S&T cable in GI pipe/PVC pipe/trench/RCC, this also includes laying of in track & road crossings	6500	Mtr	8	52000
102	Supply & installation of CLI Push button telephone as per specification	20	Nos.	754	15080
103	Supply & installation of Wireless router/Access point for access point for Wifi connectivity	10	Nos.	7424	74240
104	Supply & fixing of 20mm PVC casing capping ISI mark as per specification	100	Mtr	21	2100
105	Supply & Laying of half round RCC pipe & collars of 150mm internal dia (2m long) along with collars as per IS no. 458/2003 of NP type (2m= 1m + 1M) after laying of cables in trenches (cable laying is covered separately)	1000	RM	335	335000
106	Laying of CAT-6 cable through steel pipes/casing capping etc as per technical specifications	915	RM	11	10065
Total Amount					14405377
Quoted Rate in terms of Percentage Above / At Par / Percentage below, on cumulative Tender Cost					
Total Quoted Amount in INR (In Figures)					
Total Quoted Amount in INR (In Words)					

Seal & Signature of Tenderer

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NOTE :

- i) Contractor to quote single percentage above/at par/below, if different rates quoted by the contractor, the offer will be summarily rejected.
- ii) GST is inclusive.
- iii) Tenderer must quote the rates in both "figures" and "words"

Signature of Contractor _____

Name of Authorized person _____

Date & Seal of Company _____

----- END OF TENDER DOCUMENT -----

Seal & Signature of Tenderer

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