



OFFICE OF THE CHIEF EXECUTIVE OFFICER

Haldia Development Authority (ISO 9001:2015 Certified)

(A Statutory Authority under Government of West Bengal)

City Centre, P.O. Debhog, Haldia-721657, Dist: Purba Medinipur

Ph.: (03224) 255926, Fax-255927, e-mail: ceo.hda@gmail.com Web: www.hda.gov.in,

Toll Free No.1800-345-3224

ELECTRICAL ENGINEERING DEPARTMENT

INVITE E-TENDER

E-TENDER NO.:04/HDA/EC-ELECT/2020-2021

FOR

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF LED STREET LIGHT
FROM HOSSAINPUR BRIDGE TO RAJARAMCHAK SIMA BANDH VIA RAJARAMCHAK
SIKSHA NIKETAN AND ONE 12 MTR. MINI-MAST WITH LED FLOOD LIGHTING
ARRANGEMENT AT THE PREMISES OF RAJARAMCHAK SCHOOL GROUND UNDER
NANDIGRAM BLOCK NO.-I (TOTAL ROUTE LENGTH: 1300MTR.).**



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NOTICE INVITING ON LINE TENDER (E-TENDER) NO: 04/HDA/EC-ELECT/2020-2021

For and on behalf of Haldia Development Authority, the Chief Executive Officer invites Online (e-Tender) in **Two Bid System** (Technical bid & Financial bid) from reliable, resourceful, bona-fide and experienced firms / companies / individual contractors having requisite financial capability and sufficient technical credential on execution of similar nature of work. The details are given below:

1.	Name of work	:	Supply, Installation, Testing and Commissioning of LED Street Light from Hossainpur Bridge to Rajaramchak Sima Bandh via Rajaramchak Siksha Niketan and One 12 Mtr. Mini-Mast with LED Flood lighting arrangement at the premises of Rajaramchak School Ground under Nandigram Block No.-I (Total Route Length: 1300Mtr.).
2.	Location of Work	:	Supply and Installation of LED Street Lights through Hot Dipped Galvanized Iron Sheet Street Light Pole 9 Mtr. Long Swaged type with single swan neck to be extended up to 1.5 Mtr. at the top part of the pole and Mini-Mast System with LED Flood lights in the following location under Sutahata Block area: <ul style="list-style-type: none">❖ From Hossainpur Bridge to Rajaramchak Sima Bandh via Rajaramchak Siksha Niketan. (Route length approx.1300 Mtr.).❖ One 12 Mtr. height Mini-Mast at the premises of Rajaramchak School Ground under Nandigram Block No.-I.
3.	Minimum Eligibility Criteria		The intending bidders should have the following Eligibility criteria:- a) <u>Work Experience:</u> (i) The Agency should produce credentials of a similar nature of completed work [Similar nature of work means Supply, Installation, Testing and Commissioning of LED street lighting / High mast with LED Flood Lighting / Mini Mast with LED Flood Lighting] of minimum value of <u>Rs. 14,22,180.00</u> only during Five (05) years prior to the date of issue of the NIT in any Government / Semi Government / Undertakings/ Statutory bodies / PSU / Local Bodies. Scan copy of Credential of satisfactory Completion Certificate shall have to be up loaded with Techno- commercial bid in support of the claim. <p style="text-align: center;">Or</p> (ii) The Agency should produce credentials of two (02) similar nature of completed works, [Similar nature of work means Supply,

		<p>Installation, Testing and Commissioning of LED street lighting / High mast with LED Flood Lighting / Mini Mast with LED Flood Lighting] each of the minimum value of <u>Rs. 10,66,635.00</u> only during Five (05) years prior to the date of issue of the NIT in any Government / Semi Government / Undertakings/ Statutory bodies / PSU / Local Bodies.</p> <p>Scan copy of Credential of satisfactory Completion Certificate shall have to be up loaded with Techno- commercial bid in support of the claim.</p> <p style="text-align: center;">Or</p> <p>(iii) The Agency should produce credentials of one single running work of similar nature which has been completed to the extent of 80% or more [Similar nature of work means Supply, Installation, Testing and Commissioning of LED street lighting / High mast with LED Flood Lighting / Mini Mast with LED Flood Lighting] and value of completed work is <u>Rs. 14,22,180.00</u> only in any Government / Semi Government / Undertakings/ Statutory bodies / PSU / Local Bodies.</p> <p>In case of running works, only those tenderers will be qualified who will submit the certificate of satisfactory running work from the concerned Executive Engineer, or equivalent competent authority will be eligible for the tender. In the required certificate it should be clearly stated that the work is in progress satisfactorily and also that no penal action has been initiated against the executed agency, i.e. the tenderer. Scan copy of required documents as mentioned above of any Government / Semi Government / Undertakings/ Statutory bodies / PSU / Local Body, shall have to be up loaded with Techno-commercial bid in support of the claim.</p> <p>b) <u>Financial Criteria:</u> The average annual turnover of the bidder, during the last three (3) Financial Years from contracting business should be equal to or more than <u>Rs.21,33,269.00</u>.</p>
<p>4. Essential documents & other Eligibility Criteria.</p>		<p>The bidder should upload scanned copy of the following documents along with bids:</p> <ul style="list-style-type: none"> • Copies of original documents defining the constitution or legal status, Name and address, registration detail of Firm / Company / Agency, place of registration, and principal place of business, name of proprietor and written power of attorney of the signatory of the Bid to commit the Bidder. • Completion Certificate and filled in <u>Form – I</u> along with of similar type of project/job under any Government details / Semi Government / Undertakings / Autonomous / Statutory bodies/ Local bodies. • Copy of the Audited Balance Sheet of last three Financial Years (authenticated by a Chartered Accountant) and filled in <u>Form – II</u> for establishing average Annual Turnover in contractual business. • PAN Card Xerox Copy.

			<ul style="list-style-type: none"> • Copy of Latest Income Tax return. • Copy of Valid Trade Licence. • Copy of Valid Profession Tax Clearance Certificate (PTCC) or Up-to-date Profession Tax payment challan, if applicable. If this is not applicable, the bidder must submit [upload] a declaration in this regard. • Copy of the Goods and Services Tax (GST) Registration Certificate, issued by Government of India. • Valid Electrical Supervisor License issued by competent authority for the relevant part. • Copy of Valid Electrical Contractor's License issued by competent authority of State / Central Govt. in line with The Indian Electricity Rules, 1956. • In case the bidder does not have any office within Haldia Planning Area, he shall submit along with the technical bid an undertaking on non-judicial stamp paper to keep a site office within planning area or an agreement with any Electrical Contractor of the Haldia Planning Area (having valid Electrical Contractor License and valid Electrical Supervisor License) for erection & maintenance period for five years of the Street Lighting System. • Undertaking on deployment of machineries, Laboratory equipments, Technical Personnel for execution of work and correctness of the documents submitted along with this tender. • List of projects undertaken during last five years. • Information regarding any litigation or arbitration during the last five years in which the Bidder is involved, the parties concerned the disputed amount, and the matter. • The Annexure-II filled and signed (with agency's seal) on non-judicial stamp paper.
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5. The bidders are required to submit bid as per the instructions of the instant bidding documents (including Notice Inviting e-Tender). Bid will be considered rejected if any of the essential documents is not submitted by the bidder. Essential documents means papers related to “**Minimum Eligibility Criteria**” and “**Essential documents & other Eligibility Criteria**”, including Earnest Money Deposit.

6. AVAILABILITY OF THE BIDDING DOCUMENTS:

The bidding documents (in full) would be available in the following websites:-

(i) HDA 's official website : www.hda.gov.in &

(ii) www.wbtenders.gov.in

Corrigenda, Addenda, Queries & Clarifications, if any, would also be available in the aforesaid website.

Sd/-
Chief Executive Officer
Haldia Development Authority



SCHEDULE OF TENDER [SOT]

NOTICE INVITING ON LINE TENDER (E-TENDER) NO: 04/HDA/EC-ELECT/2020-2021

1	NAME OF WORK	: Supply, Installation, Testing and Commissioning of LED Street Light from Hossainpur Bridge to Rajaramchak Sima Bandh via Rajaramchak Siksha Niketan and One 12 Mtr. Mini-Mast with LED Flood lighting arrangement at the premises of Rajaramchak School Ground under Nandigram Block No.-I (Total Route Length: 1300Mtr.).
2	Tender Inviting Authority	: Chief Executive Officer Haldia Development Authority City Centre, PO-Debhog, Haldia, 721657 Phone No. 03224 255926 Email ID: ceo.hda@gmail.com
3	Mode of Tender	: E - Procurement system. Through website www.hda.gov.in & www.wbtenders.gov.in No physical tender is acceptable.
4	Estimated Amount (including all taxes and applicable charges)	: Rs. 35,55,449.00
5	Earnest Money Deposit (EMD)	: The intending bidders must deposit Rs.71,109.00 only as Earnest Money to Haldia Development Authority along with their Techno- commercial bid. In case the said Earnest Money is not deposited by the bidder, the respective bid will be summarily rejected and bidder will be treated as non-responsive. Earnest money will be deposited as per instructions given at I.T.B.
6	Date of Publish of NIT	: 09/07/2020
7	Document download start date	: 10/07/2020 at 4.30 p.m.
8	Document download end date & time	: 24/07/2020 up to 02:30 p.m.
9	Pre-bid meeting in the Board Room of the office of CEO, HDA, Haldia	: 14/07/2020 at 11.30 a.m.
10	Bid submission start date.	: 16/07/2020 at 5.00 p.m.

11	Last date of Online submission of Technical Bid and Financial Bid.	:	24/07/2020 up to 03:30 p.m.
12	Opening of Technical Bid at the Office of the CEO, HDA Haldia	:	27/07/2020 up to 12:30 p.m.
13	Opening of Financial Bid at the Office of the CEO, HDA Haldia	:	The date & time shall be informed later.
14	Completion Period	:	70 days from the date of issue of the work Order.
15	Validity of bid	:	<u>180 days</u> from the date of opening of the Techno-Commercial Bid.
16	Operation, Maintenance and Defect Liability Period.	:	Five Years from the date of commissioning of the work.

INFORMATION TO THE BIDDERS (I.T.B.)

1. Site inspection before submission of tender:

Before submitting the tender, the intending tenderer should make them selves acquainted thoroughly with the local conditions prevailing at site by actual inspection and taking into consideration all factors and difficulties likely to be involved in the execution of work in all respect and no claim whatsoever will be entertained on these account afterwards.

2. Pre - Bid Meeting:

The prospective bidders are requested to submit their queries / observations / suggestions / requests for clarification if any in connection with the instant Bidding Documents to Executive Engineer (Electrical), HDA on or before the time specified for pre - bid meeting as indicated in the Schedule Of Tender [SOT], to enable Haldia Development Authority to prepare response / clarifications and make pre-bid meeting meaningful. The pre-bid meeting will be conducted off-line on behalf of HDA. The purpose of this pre-bid meeting will be to clarify issues and to answer questions on any matter (in connection with the instant Bidding Documents only) that may be raised at that stage. Authorised representative(s) of the prospective bidders will be allowed to attend the Pre-bid meeting, which will be held on the date, time & at the venue stipulated in the Schedule Of Tender (SOT).

Any modification to the Bidding Documents, which may become necessary as a result of the Pre-bid meetings, shall be made through the issue of an addendum / corrigendum.

3. INSTRUCTIONS FOR ONLINE BID SUBMISSION:

- (a) This is an e-procurement event of **HALDIA DEVELOPMEN AUTHORITY**. The intending bidders are requested to go through the contents of this bidding document, including all terms & conditions and Technical Specifications before submitting online tender. Bidders who do not comply with the requirements / conditions, with documentary proof (wherever required), will not qualify in the tender for opening of Price Bid.
- (b) The bidders interested to submit the bid online, shall get registered and obtain a digital signature as per the procedure prescribed below:
- (c) Online Tenders can be submitted by logging in **www.wbtenders.gov.in** only.
- (d) The e-Tender platform shall remain open from the pre-announced date & time and for as much duration as mentioned in the Schedule of Tender (SOT).
- (e) E-tender cannot be accessed after the closing date and time of e-Tender, mentioned in the Schedule of Tender (SOT) of the instant bidding documents.
- (f) Both Techno- commercial bid & Price bid are to be submitted through on line as per the Schedule of Tender (SOT). Price indicated anywhere else, in any other form or manner, will not be considered for evaluation of Price Bid.
- (g) All electronic bids submitted during the e-Tender process shall be legally binding on the bidders. Any bid will be considered as the valid bid offered by that bidder and acceptance of the same by HDA will form a binding contract between HDA and the bidder, for execution of the work. Such successful bidder shall be called hereafter the 'CONTRACTOR/ Agency'.
- (h) Agencies/Bidders who are interested in participating HDA's e-tenders are requested to contact to the toll free **Help-line No. 1800 3070 2232 of National Informatics Centre** for registration, computer setting and other clarification on e-tendering. **Shri Atanu Moitra, System Analyst, HDA (Mobile No. 8170045634)** is stationed at the office of the Haldia

Development Authority during working hours. The agencies/bidders can visit the office and get assistance from him.

4. **Procedure for deposition of Earnest money:**

The Earnest Money shall be deposited by the bidder on-line through his net banking enabled bank account, maintained at any bank or through any bank by pre-generating NEFT/ RTGS challan from the e-tender portal. Intending Bidder will get the beneficiary details from e-tender portal with the help of Digital Signature Certificate and may transfer the EMD from their respective Bank to the beneficiary bank account no. The name of Beneficiary bank (at present ICICI Bank), Account no. & IFSC Code are given in the e-portal. The details of deposition of EMD can be obtained from the following link.

“wbtenders.gov.in ---Home Page---Bidders Manual Kit---Help for on-line Receipt and refund of EMD”. Intending bidder who wants to transfer EMD through NEFT/RTGS must read the instruction of the Challan generated from E-Procurement site.

Bidders are also advised to submit EMD of their bid, at least 3 working days before the bid submission closing date as it requires time for processing of payment of EMD and bid can be successfully submitted only after receipt of EMD.

Note:-Earnest money through offline instruments like Bank Draft, Pay Order etc. will not be accepted for e-tender procurement of this office.

5. **Release of Earnest Money deposit:**

The earnest money of the unsuccessful bidder will be released without any interest after finalization of the instant tender. The earnest money of the successful bidder will be released after completion of work and payment of final bill.

6. Relevant documents as mentioned in the clause no.3 [Minimum Eligibility Criteria] & Clause no 4 [Essential documents & other Eligibility Criteria] of the notice Inviting on line must be uploaded online for participating in this tender. If the documents are not submitted online within the stipulated date & time, then bid of the applicant shall summarily be cancelled and the Price bid of the offer shall not be opened.
7. The Credential Certificate should be pertaining to the work specified in the NIT. The Credential certificate should not be misleading the authority. If the Credential certificate has mention on multiple nature of works executed by the agency in a single tender including the work specified in this NIT, then the value of the work as specified in this NIT will only be taken into account for evaluating the eligibility of the bidder. The decision of the authority in this respect is final and binding.
8. **Authority in signing the bid / offer:** In case the bid is submitted by ,
 - (a) A Proprietorship Firm, the same should be signed either by the Proprietor or other person(s), holding a valid power of attorney / authorisation from the proprietor, in connection with this bidding process. The signature of such power of attorney holder(s) / authorised person(s) should be attested by the proprietor. Such power of attorney / authorisation should be uploaded along with Techno-commercial Bid [Part I].
 - (b) In case the bid is submitted by a Partnership Firm, the same should be signed either by the partner(s), holding valid power of attorney from the partners or other person(s), holding valid authorisation from such power of attorney holder(s), subject to approval of the partner(s) in the matter of giving such authorization, in connection with this bid. The signature of such power of attorney holder(s) / authorised person(s) should be attested by the partners or power of attorney

holder, as the case may be. Such power of attorney / authorisation should be uploaded along with Techno-commercial Bid [Part I].

- (c) In case the bid is submitted by a Limited Company, the same should be signed by the person(s) holding valid power of attorney / authorisation, executed in his / their favour (in connection with this bid) and the signature of such power of attorney holder(s) / authorised person(s) should also be attested, in accordance with the constitution of the Limited Company. Such power of attorney / authorisation should be uploaded along with Techno-commercial Bid [Part I].

9. For verification of the submitted documents , if any tenderer fails to produce the original hard copies of the documents within the specified time frame or if any deviation is detected in the hard copies from the uploaded soft copies or if there is any suppression of fact during any time of the tendering process or even after the issuance of work order, the tenderer will be suspended from participating in the tenders on e-Tender platform up to 2 (two) years and the instant work order may be cancelled.

10. **Submission of Price Bid:**

(a) The Price Bid shall be submitted in the prescribed Bid Form i.e. as per BOQ. The Bill of Quantities (**BOQ**) for the work is given in the Price Bid and the bidders shall properly assess each item. The quoted rate against each item in this table shall be for the scope of mentioned in this tender. The lowest cumulative amount of all quantity mentioned in the BOQ including all taxes, shall be taken for evaluation of the price bid. The quoted amount shall cover the entire scope of work given in the Price bid along with five year operation and comprehensive Maintenance liability period.

(b) The tenderer shall include income tax, cess etc., octroi if any, toll, ferry charges, local charges, royalties, turn over tax, operation and comprehensive maintenance charges and all other charges as applicable while quoting the rate including G.S.T as applicable.

(c) All other charges like freight, loading, unloading etc as would be required for completion of the work shall also be included in the rate quoted. No extra claim what so ever in this account shall be entertained.

(d) It may again be reiterated that Income Tax, Royalty, Construction Workers' Welfare Cess and similar other statutory levy / cess etc. will have to be borne by the contractor while executing the work. Considering all the factors, the price is to be quoted accordingly.

(e) No escalation of cost is permissible at any time after submission of the bid.

(f) The total amount is to be quoted both in words and figures clearly in the specified space of the Price bid. Incomplete Price bid shall be rejected.

(g) Conditional and incomplete Price bid shall be summarily rejected.

11. No deviation/variation of the techno-commercial terms and conditions of the bidding documents will be considered by HDA. Submission of bid in the e- Tender platform by any bidder confirms their acceptance of the techno-commercial terms and conditions of the bidding documents.

12. Haldia Development Authority reserves the right to accept or reject any bid (in full or part) and to annul the bidding process and to reject all bids, at any time prior to contract award, without assigning any reason thereof and without thereby incurring any liability. The decision of authority with respect to this tender is final and binding.

13. **Evaluation of Price bid / Acceptance of Tender:**

Lowest cumulative amount of all quantity mentioned in the BOQ including all taxes shall be taken for evaluation of the price bid of the Techno- commercial qualified bidders and contract may be awarded to the lowest bidder. However, HDA does not bind himself to do so and reserves the

right to reject any or all the tenders, without assigning any reason and also reserves the right to split the work amongst more than one Tenderer.

14. **Withdrawal of tender:** A tender once submitted and opened the Techno - Commercial bid, shall not be withdrawn within a period of 180 days from the date of the opening of the Techno-commercial bid. If a tenderer withdraw his tender within this period, the EMD shall be forfeited.
15. **Opening of Part-I (i.e. Techno-commercial Bid) and Part-II (i.e. Price Bid):** Part I (Techno-commercial Bid) will be opened electronically on specified date and time, as given in the Schedule of Tender (SOT). Bidder(s) can witness electronic opening of bid(s). Part II (Price Bid) will be opened electronically of only those bidder(s) who qualify(ies) in the “ Techno-commercial Bid” [Part I]. Such bidder(s) will be intimated date of opening of Part II (Price Bid), through e-mail to his valid e-mail ID(s) confirmed by them.

16. Additional Performance Security Deposit:

As per Memorandum No. 4608-F(Y) Dt. 18.07.2018 of Additional Chief Secretary to the Govt. of West Bengal, Finance Department, Audit Branch, Additional Performance Security @ 10% of the tendered amount should be deposited by the successful bidder in the form of Bank Guarantee from any Scheduled Bank within seven working days from the date of issuance of LOA, if the accepted bid value is 80% or less of the Estimated Amount Put To Tender. If the bidder fails to submit the Additional Performance Security within seven working days from the date of issuance of Letter of Acceptance, his Earnest Money will be forfeited and other necessary actions as per NIT like blacklisting of the contractor, etc, may be taken. The Bank Guarantee shall have to be valid up to end of the Contract Period and shall be renewed accordingly, if required.

17. Refund of Additional Performance Security Deposit:

As per Memorandum No. 4608-F(Y) Dt. 18.07.2018 of Additional Chief Secretary to the Govt. of West Bengal, Finance Department, Audit Branch, the Bank Guarantee shall be returned immediately on successful completion of the Contract. If the bidder fails to complete the work successfully, the Additional Performance Security shall be forfeited at any time during the pendency of the contract period after serving proper notice to the contractor. Necessary provisions regarding deduction of security deposit from the progressive bills of the contractor as per relevant clauses of the contract shall in no way be altered/affected by provision of this Additional Performance Security.

Terms and Conditions

1. The works will be executed to comply with the General Specifications for Electrical works and conforming to the Indian Electricity Act & rules, BIS & direction of Engineer-in-charge and other labour laws in this regard.

2. Completion Period:

The Successful bidder shall complete the execution of work within **70 days** from the date of handing over of the site. Penalty as prescribed in this tender shall be imposed for every week delay in completion of the work.

3. Extension of completion period:

For any of extra or additional work of any kind or any delayed due to the HDA's account due to giving site clearance or any unforeseen reason at site for which or other special circumstances, of any kind, beyond the control of the Agency/ Contractor or any other reason not attributable to the Agency/ Contractor [including hindrance at site of work], cause delay in completing the work, the Contractor shall apply to the Authority in writing, for suitable extension of completion period, within **7 (seven) days** from the date of occurrence of the reason and the Authority shall thereupon consider the stated reasons in the manner deemed necessary and shall either reject the application or determine and allow, in writing, the extension period as he would deem proper for completion of the work, with or without the imposition of "**Penalty**".

4. Payment Terms:

- (a) Payment of RA as well as final bill will depend upon the availability of fund and no financial claim in case of any delay in payment will be entertained.
- (b) Payment on supply without successful erection and commissioning will not be entertained. Materials which will be supplied should be supported by valid challans, test certificates and other relevant documents.
- (c) The Contractor/ Agency will notify the authority regarding the work being completed. The quantity and quality of executed work will be taken into account for the preparation of bill. The engineers of HDA shall verify the work executed by the bidder. Only the items which are successfully installed and commissioned will be taken in the preparation of bill.
- (d) All the applicable routine test, type test and other test reports shall be submitted along with the bill prayer.
- (e) In case the successful bidder does not have its office within planning area, the bidder shall have compulsory one site office within Haldia Planning Area or agreement with any Electrical Contractor of Planning Area for erection & maintenance. Without this, payment shall not be processed.
- (f) No advance payment will be made to the contractor.
- (g) Progressive payment will be paid in running account bill subject to good performance. Payment may be withheld / not made on average or poor quality of job. If the agency gets average or poor grading of work quality, he may be debarred for one year from the tender of HDA.
- (h) An amount equal to 1% of the contract amount will be deducted from the RA bill / final bill on account of "the building and other construction work (regulation of employment and condition of service) Act, 1996" and "The building and other construction work welfare cess Act, 1996" apart from other statutory deductions from bills/ payment due.

5. Taxes & Duties:

Changes in statutory taxes & duties by Central or state Government during the schedule completion / contract period, are applicable to this contract. The Agency/ Contractor should claim such changes producing supporting documents with his claim in this regard.

6. Security Deposit/Deduction:

Ten Percent (10%) of the RA bill value excluding the G.S.T will be deducted from bill as Security Deposit.

7. Release of security deposit:

The security deposit [S.D.] will be released subject to satisfactory performance of the maintenance work, and its components during the operation and maintenance period of the installation. Failure to execute proper operation and maintenance of the work will **lead to forfeiture of the security deposit.**

The schedule of security deposit release will be as per the following:

(a) **Release of 30% of the security deduction amount: After two years of liability period.**

(b) **Release of 40% of the security deduction amount: After four years of liability period.**

(c) **Release of rest 30% of the security deduction amount: After five years of liability period.**

8. Procedure for release of security Deposit:

An application along with a prescribed format of this office to be submitted for release of Security Deposit for which the contractor should apply to the authority at least 2 (two) month prior to the last date of defect liability period with an undertaking that the work is maintained properly as per the terms of contract.

9. INSPECTION & TESTING:

Joint Inspection [Physical inspection] of all the materials will be carried out at site store of the successful bidder by the representative of HDA for which the contractor / Agency should intimate Engineer In- Charge at least seven days before the erection of the materials at site. Following documents must be accompanied with the offer of inspection letter.

(a) Delivery Challan of the materials.

(b) Routine Test / Type Test certificate in case of Power cable.

10. Labour Welfare:

The Agencies/contractor shall abide by all the labour welfare laws Safety Rules and their modifications from time to time, if any, within the contract period. Minimum labour wages act, labour facilities, E.S.I, P.F, Bonus facilities etc. should be provided as per latest Govt. order/Circulars. In no case, HDA shall be held responsible for any eventualities in this regard accident including payment of wages to personnel deployed by the contractor.

11. COMMENCEMENT, EXECUTION & COMPLETION OF WORK :

(a) The successful Tenderer shall have to start the work at site within 7 days after receipt of the work order failing which work order shall be cancelled with forfeiture of earnest money deposited with HDA without assigning any reason.

(b) After receipt of the Work Order, the successful Agency / Tenderer shall submit to the authority, the work program for execution of the tendered job, Bar chart of execution of the work, establish site office and deploy Site Engineers. He shall also maintain Work Order Copy, Drawings, schedule of work and tools & tackles at site to assist HDA Engineers to carry out necessary checking and supervision of the work.

(c) For any reason, the Contractor is unable to adhere to his earlier programmed, he shall submit his revised programme for completion of work within the stipulated time, whenever asked to do so.

(d) The Contractor / Agency shall have to deploy sufficient competent technical Engineer /supervisory and personals against the work. The agency shall have to inform HDA the name of

personal engaged against the work. In case any deployed personals are found inefficient or incompetent, the agency shall have to replace the personal within seven days of HDA's direction.

- (e) The personnel/workers engaged for the work shall be the employees of the agency/contractor and will take their remuneration / wages, statutory benefits from the agency/ contractor. They will have no claim and liabilities of whatsoever nature including monitory claims or other claim or benefits from Haldia Development Authority. Any liability arising under Municipality, State or Central Govt. laws and regulations, will also be the sole responsibility of the concerned Agency/ Contractor and the Authority shall not be responsible for such liabilities.
- (f) **If substandard works during the execution of work is detected, then the authority shall have right to direct the agency to re-do the work once again.**
- (g) **The awarded agency shall co ordinate with other working agency and WBSEDCL officials and WBSEDCL Sub-Stations for smooth operation and maintenance of LED Street Lights at all location.**

12. Assignment and sub-contracting:

The Contractor shall not, directly or indirectly, transfer, assign, sublet or sub-contract the whole of the work. Unless otherwise stated in the contract, the Contractor shall not, directly or indirectly, transfer, assign, sublet or sub-contract any part of the work without prior consent of the Haldia Development Authority. Any such consent shall not relieve the Contractor from any of their liabilities or obligations under the contract. If the authority comes to know that the agency has sub-let the work, then action may be taken to terminate the contract and the Security deposit and Earnest money may be forfeited.

13. Safety Provision:

The Agency/ Contractor shall have to ensure safety of all their working personnel to the fullest compliance of the provisions of **general safety rules/regulations**. The Agency / Contractor shall have to provide (at their own expenses) all required **Personal Protection Equipment (PPE)** [such as **Helmets, Nose Masks, Hand Gloves**, etc.] & **Safety Gears** for all personnel and labourers engaged during the work .The Contractor shall be solely responsible for consequences arising out of non-compliance or violation of safety rules/ regulations.

14. Workmen's Compensation:

The Contractor shall have to provide full medical treatment to their staff & labourers, in case of "**Accident on Duty**", which will inter alia include their obligations under the **Workmen's Compensation Act, 1923**, including all amendments thereof. The HDA shall in no manner be liable to the Agency / Contractor or any person engaged /employed by them [including that of Sub-contractor] or any other person, for injuries or death caused as a result of accidents occurred, either within or outside the site of work, under the contract. The Agency / Contractor shall be responsible for such contingencies and will make good all claims for compensation, claim by their personnel/workmen or the families of the sufferer(s), as the case may be, or as per the decision of the appropriate authority/tribunal or other involved persons.

15. The Emergency Services:

The awarded agency/ contractor will have to attend immediately & spontaneously rectify all complains for any break down, malfunctioning of the Dedicated Illumination Projects within 12 hours (maxim.) of occurrence. The agency should not wait for any call over telephone/mobile/e-mail from HDA & also will have to restore the system without any delay. For any non satisfactory

service the work order of the agency shall be cancelled and EMD and SD will be forfeited. Sufficient spares are to be kept reserve by the agency so that the agency is capable to maintain the installation promptly.

16. L.D. / Compensation for delay and termination:

The time allowed for carrying the work as per tender shall be strictly observed by the Agency/contractor and shall be reckoned from the date of commencement of the work as per work order. The time being the essence of contract on the part of the Agency/ contractor, the Agency/ contractor shall commence execution of the work from the date of issue of the work order for commencement of the work and continue such work to ensure good and proportionate progress in proportionate time maintaining proper quality of the work.

In the event of the Agency/contractor failing to comply with the proportionate progress in proportionate time as well as instruction/order of the competent authority of HDA, he shall be liable to pay as compensation a amount equal to @ ½% of the Contract Price [excluding GST], for every week or part thereof, beyond the scheduled date of completion, will be deducted from the Agency /Contractor's bill, Provided always the amount of such compensation shall not exceed 10 % of the Agency's /Contractors bill value [excluding GST] or as will be decided by the HDA (whose decision in writing shall be final in this regard) on the final bill amount.

The competent authority of HDA shall have power to resign the contract (of which rescission notice in writing to the contractor shall be conclusive evidence) in which case the Earnest Money / security deposit of the Agency's / contractor's shall stand forfeited and be absolutely at the disposal of Govt. /HDA. After decision of the contract, the contractor shall not be entitled to recover or be paid any sum for any work therefore actually perform under the contract unless and until the competent authority will have certified in writing the performance of such work and value payable in respect thereof and he shall only be entitled to be paid the value so certified.

17. All work under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Engineer-in-charge and all his subordinates and the contractor shall at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-charge or his subordinate to visit the works shall have been given to the contractor, either himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for that purpose. Orders given to the contractor's agent shall be considered to have the same force as if he had been given to the contractor himself.

18. Site Inspection and Complain Monitoring Register:

The supervisor deployed by the agency shall inspect the entire lighting project weekly and report every observation details in the register. All emergency maintenance/breakdown calls over telephone/mail/mobile shall be recorded in the complain register with complain attendance and disposal details. The agency must submit the registers along the prayer for security deposit release. Payment shall not be made if the registers are not properly maintained and submitted to the authority.

19. Equipment and Machineries:

The agency should possess the requisite and relevant equipment and machineries for the work. Any tit bit incidental work for performing job to be done free of cost. If equipment and machineries are not deployed as per the undertaking given by the contractor, the Engineer in charge is authorized to stop the work and direct the contract to deploy them immediately. If the contractor fails to carry out the direction, then the authority may take appropriate action including forfeiture of EMD and cancellation of the work order.

20. Transportation of materials:

All materials, spare parts, tools, tackles, service equipment, including consumables, required under this contract, will have to be packed, securely placed and protected by the Contractor during transportation. The Contractor will be held responsible for the inefficient packing, storing protection of the materials and transportation of materials. HDA authority will not be responsible for transportation of goods for the instant tender job.

21. Registration of all workers engaged in building and other construction workers to be done under the Building and other Construction Workers' (RE & CS) Act, 1996 and the State Rules, 2004 framed there under to provide for their safety, health and welfare measures.
22. Credibility of the agency engaged for more than two works in HDA will be evaluated by the tender committee and whether to allow the agency to participate in further tenders of the authority will be decided by the committee. Decision of the authority is final and binding on the concerned agency.
23. The Agency/contractor shall collect photography/video photography of the site firstly before the start of the work, secondly mid-way and materials stack in the execution of different stages of work and lastly after the completion of the work. The photographs shall have date digital date printed. **A minimum of 10 such photographs should be submitted at the time of submission claim for payment.** No separate payment will be made to the contractor for this purpose. Payment shall not be made without submitting the photographs/video photographs.
24. HDA reserves the right not to allow the agency to participate in future tenders under the following circumstances.
 - (i) Delay in completion of job.
 - (ii) Performance in terms of either quality of materials and workmanship.

25. Termination of Contract/ Work Order:

The authority may terminate the contract/work order due to the following reasons.

- i) Poor Progress of work.
- ii) Poor Quality of work.
- iii) Adoption of any unfair means during execution of work.
- iv) Violation/Non-compliance of any instructions of the authority.

For termination of the contract/work, the authority will issue a 7 days' notice to the agency/contract to make up the discrepancy/shortfall of the work as instructed by the authority, failing which the contract/work order will be terminated with forfeiture of E.M.D., S.D., Performance Security etc.

26. Discretion of the authority inviting tender:

The tender inviting authority reserves the right to accept or to reject any or all applications/tenders without assigning any reason whatsoever. On matters of dispute authority decision shall be final and binding. The quantity of work indicated above is provisional and should not be taken as firm. The extent to which the work would be actually executed will depend on the final decision of the Chief Executive Officer, HDA. He however reserves the right to reduce the quantity even substantially without assigning any reason thereof and take up the same otherwise for which no compensation is payable under any circumstances.

SCOPE OF WORK AND TECHNICAL SPECIFICATION

For Supply, Installation, Testing and Commissioning of LED Street Light from Hossainpur Bridge to Rajaramchak Sima Bandh via Rajaramchak Siksha Niketan and One 12 Mtr. Mini-Mast with LED Flood lighting arrangement at the premises of Rajaramchak School Ground under Nandigram Block No.-I (Total Route Length: 1300Mtr.) as follows:

- ❖ Supply, delivery & installation of complete LED Flood Light Set of 150W as per the specifications of the BOQ comply with the Annexure-VI.
- ❖ Supply, delivery & installation of complete LED Street Light Set of 90W as per the specifications of the BOQ comply with the Annexure-VI.
- ❖ Supply and delivery of Hot Dipped Galvanized Iron Sheet Street Light Tubular Pole 9M Long Swaged type with single swan neck to be extended up to 1.5 Mtr. at the top part of the pole conforming to **IS: 2713/1980** on designation, **Code: 410-SP-26**, entry arrangement for light connecting wire; transportation and delivery to said location (The pole manufacturer should have own hot deep galvanization facility. The poles shall be hot dip galvanized in single dipping as per **BS EN ISO 1461** 2009 standards with average coating thickness of 70 micron). Drawing given in **Annexure-III**.
- ❖ Supply, delivery, installation, commissioning & erection of 12 Mtr. Height Hot Dipped Galvanized (BS EN ISO: 1461 2009) coated, hot rolled Sheet of non-structural alloy 3.0 mm thick (BSEN 10025) Octagonal/polygonal Mini-mast (single section) with monkey climbing arrangement and 1 no Full Moon Bracket suitable to mount 4 nos. of LED flood light fittings. Drawing given in **Annexure-IV**.
- ❖ Preparation of RCC foundation of 550 mm dia and 2200 mm high with required rod, cement, chips and sand etc. at the ratio **1:1.5:3 (Concrete Grade: M-20)** & minimum 1% steel with ground bolt 4nos for fixing the 12 Mtr Mast (including supply of all necessary material) (design of this RCC foundation is given at **Annexure -V**). After concrete curing, erection of the 12 Mtr Mast bolted and welded.
- ❖ During excavation of soil for the purpose of foundation of poles and the purpose of trench for cable laying, the existing road and other utilities should not be damaged. If there is any damage happened that is to make good at free of cost by the successful bidder.
- ❖ Supply and laying of 1.1 KV grade 4 Core X 16 Sq mm XLPE insulated and PVC sheathed aluminum armored Cable ISI marked [As per IS 7098 (Part-I, 1988)].
- ❖ Supply and fixing of cable Lugs, Glands for power cable termination.
- ❖ Earthing with GI Strips at the suitable location of the mast.
- ❖ Supply & fixing 50 mm dia. medium gauge GI Pipe (ISI mark) as per the description stated at BOQ.
- ❖ Laying only Cable upto 50 sq.mm through existing RCC/Hume/ GI pipe /open masonry trench for single, 2, 3, 3½ & 4 core.
- ❖ Supply and laying of HDPE pipe as per the description stated at BOQ.
- ❖ Supply and installation of single phase Feeder pillar box of size 1000 X 1000 X 400 mm made of 4 mm thick weather proof epoxy painted or 2.5 mm. GI sheet (ISI Marked) steel sheet outdoor type with top canopy, sides having lovers for ventilation, double door, complete with cu bus-bar, provision for installation of single phase meter at right side of the feeder pillar with individual locking arrangement as per direction of engineer-in-charge stated at BOQ.
- ❖ Pipe Earthing as per the description stated at BOQ.
- ❖ To keep contact with the Officials of WBSEDCL for connection and maintenance.

- ❖ The cable shall be joint if require during five years defect liability period ,with heat shrinkable type cable jointing kits with suitable masonry work at accident/damage locations immediately to restore all lights for glowing.
- ❖ More than two joints of cable in a single span will not be allowed. In that case the damaged cable of the entire span is to be replaced by new cable during five years defect liability period.
- ❖ All works as per the BOQ (**Annexure-I**) to be done by the successful bidder. Any incidental works against accidental damage or any other reason to be done by the successful bidder without claim from the authority.
- ❖ **The Agency must procure the materials from the Manufacturer / OEM or from their authorized Sales channel so that the standard warranty / support of the Manufacturer / OEM becomes applicable to the products to be delivered and installed by them.**
- ❖ **Documents that authenticates such procurement form the Manufacturer / OEM or from their authorized sales channel and standard warranty / support should be sent from the e-mail of the Manufacturer / OEM /authorized sales channel to the e-mail of Engineer-in-Charge and hard copy of it to be submitted during execution of work/submission of bill.**
- ❖ If any refurbished material is supplied and installed, panel action will be taken as per existing rules.
- ❖ Operation, comprehensive maintenance and defect liability period is Five (05) year from the date of Completion of the work.
- ❖ The Agency / Contractor shall submit the details of Specification, make and model (Catalogue) of the Materials / Equipment, Test certificate, etc to Site-In-Charge before Procurement.

Sd/-
Chief Executive Officer
Haldia Development Authority

Memo No.: 547(11)/HDA/IX-N-149(Part-IV)

Dated: 08/07/2020

Copy forwarded for information to:

1. The Chairman, Haldia Development Authority.
2. The District Magistrate, Purba Medinipur.
3. The Additional District Magistrate & Additional Executive Officer, Purba Medinipur Zilla Parishad, Haldia, Purba Medinipur.
4. The Sub-Divisional Officer, Haldia, Purba Medinipur.
5. The Savapati, Nandigram-I Panchayet Samity
6. The Division Manager, Haldia O&M Division, Akash Ganga Complex, Manjushree, Haldia.
7. The District Informatics Officer, NIC, Purba Medinipur, Tamluk with a request to publish it in the official website of Purba Medinipur District.
8. Ms. Tapasi Samanta, Computer Operator, H.D.A. with a request to arrange to publish it in the website of HDA and make arrangement to send the same to DIO, NIC by e-mail.
9. Sri Samar Samanta, Stenographer, HDA with a request to make necessary arrangements for publishing advertisement in newspapers.
10. Reception, HDA.
11. Notice Board, HDA.

Sd/-
Chief Executive Officer
Haldia Development Authority

This page to be uploaded at bidder's letter head.

FORM – I

COMPLETION CERTIFICATE

(100 % PHYSICAL COMPLETION)

1	Name of the work and W.O. / LOI no. & date.	:	
2	Name of the client	:	
3	Amount put to tender	:	
4	Contractual amount against the tender	:	
5	Date of commencement of work	:	
6	Date of completion as per work order	:	
7	Actual date of completion/ Status of running work.	:	
8	Final gross value of the bill or RA bills for – Supply, Installation, Testing and Commissioning of LED street lighting / High mast with LED Flood Lighting / Mini Mast with LED Flood Lighting.	:	

I hereby declare that all the statements made above are true to my knowledge. I also understand that any discrepancy found in the above statement will render me liable for cancellation of my tender.

Signature of authorized person of the bidder
(With office seal)

Note:

1. While calculating the amount, i.e., money value of the major item stated above, amount of all sub-items like leads, lifts, disposal, transportation etc. included in the major item should be arithmetically added.
2. Credential of Completion Certificate (s) should be supported by BOQ(s).

This page to be uploaded at bidder's letter head.

FORM – II

STATEMENT ON ANNUAL TURNOVER FROM CONTRACTUAL BUSINESS

This is to certify that the following statement is the summary of the audited Balance sheet arrived from contractual business in favour of for the three consecutive years.

Sl. No.	Financial		Remarks
	Year	Turnover (rounded of)	
1	2016-2017		
2	2017-2018		
3	2018-2019		
Total			
Average Turnover			

Note:

- i) Average turnover is to be expressed in lakh of rupees, rounded up to two digits after decimal.
- ii) Average turnover for 3 years is to be obtained by dividing the total turnover by 3 (three).

Signature of authorized person of the bidder
(With office seal)

FORM –III

GENERAL INFORMATION OF THE BIDDER

[To be filled up and uploaded, duly signed & stamped at bidders letter head]

1.	Bidder's Legal Name (IN CAPITAL LETTERS) i.e. Name of Agency/ Contractor	:	
2.	Name of Registration Office	:	
3.	Legal Address of the Agency/ Contractor	:	
4.	Information regarding bidder's authorized representative(s) / contact person(s) , Name	:	
5.	Address for communication of authorized person	:	
6.	Phone no/ Email address of authorized person	:	Mobile no. Land Line no : E- mail Address:
7.	Whether the bidder is a Proprietorship Firm or Partnership Firm or Limited Company.	:	
8.	Permanent Account Number (PAN)	:	
9.	GST Registration Number (GSTIN)	:	
10.	Employees' Provident Fund (EPF) Code No. (If available)	:	
11.	Employees' State Insurance (ESI) Code No. (If available)	:	

Signature of authorized person of the bidder
(With office seal)

ANNEXURE-II

AFFIDAVIT

To be submitted on non judicial stamp paper

I/We, Sri....., S/o Sri....., aged..... Years, residing at..... Proprietor/Partner/Director of.....do hereby solemnly affirm and declare in connection with “Supply, Installation, Testing and Commissioning of LED Street Light from Hossainpur Bridge to Rajaramchak Sima Bandh via Rajaramchak Siksha Niketan and One 12 Mtr. Mini-Mast with LED Flood lighting arrangement at the premises of Rajaramchak School Ground under Nandigram Block No.-I (Total Route Length: 1300Mtr.)” of NIT No.04/HDA/EC-ELECT/2020-2021 as follows:

1. That I/We have examined the site of work and read the bidding documents including all addenda / corrigenda, issued by HDA and undertake to execute & complete all the work related to above Tender in accordance with the Technical Specification, scope of work and Tender Terms and conditions within 100 days from the date of order to commence the work, in the event of our bid being accepted.
2. That I/We, the undersigned, do certify that all the information furnished & statements made in the bid documents are true and correct to the best of my knowledge and belief.
3. I / We have not been debarred, banned or delisted by any Government or Quasi-Government Agencies or Public Sector Undertakings in India.
4. The undersigned also certifies that neither we have abandoned any work awarded to us, nor any penal action was taken against us by any department. The undersigned also declares that we do not have any running litigation with any department.
5. I also declare that the prices have been quoted in the Price Bid, electronically only of all the items of the BOQ [Annexure – I] of the tender and no direct or indirect mention of the prices has been made by me / us anywhere else in my / our bid. No extraneous conditions (like “Not Applicable”, conditional rebate, etc.), regarding the Price Bid, have been mentioned anywhere in our bid.
6. If the contract is awarded to us, we will deploy at site all necessary T & P equipments and Laboratory with necessary testing equipments / apparatus as listed below immediately on receipt of the work order. We would commence the work only on deployment of machineries at site to the full satisfaction of the Engineer-in Charge. We would be duty bound to use those equipments at site to achieve the best result as per requirement of the contract. We would upkeep and maintain those equipments in running condition till completion of the Project. Any breakdown of any equipment will be replaced immediately. No part of equipment will be shifted to another site without the written permission of the Engineer in Charge. We will also keep sufficient tool, tackles and equipment, manning during O&M of the project in **Five-Year** defect liability period.
7. We would deploy at site all necessary Technical Personnel for efficient contract management and supervision of works with a view to achieving best quality of works at site during execution. We will also keep sufficient technical personals during O&M of the project in **Five-Year** liability period.
8. We would carry out all necessary tests of all major items at frequency spelled out in the contract document / as per IS specification to achieve the best quality work at site. We will be contract bound to bring to the notice of the EIC any non-compliance of test results along with the action taken report.
9. I/We will submit the details of Specification, make and model (Catalogue) of the Materials / Equipment, Test certificate, etc to Engineer-In-Charge before Procurement.

**Signature of authorized person of the bidder
(With office seal)**

Place:

Date:

ANNEXURE-I
FINANCIAL BID FORMAT
NIT NO: 04/HDA/EC-ELECT/2020-2021

Supply, Installation, Testing and Commissioning of LED Street Light from Hossainpur Bridge to Rajaramchak Sima Bandh via Rajaramchak Siksha Niketan and One 12 Mtr. Mini-Mast with LED Flood lighting arrangement at the premises of Rajaramchak School Ground under Nandigram Block No.-I (Total Route Length: 1300Mtr.).

Item wise rates are to be quoted by the bidders for each item:

Bill of Quantities and Quantities Rates are To Be Quoted					
Sl No.	Description of Materials	Unit	Qty	Rate (Rs.) (including all taxes & applicable charges)	Amount (Rs.) (including all taxes & applicable charges)
1.	Supply & delivery of LED Street light of following specification: a) 90 W each set. b) Lumen output: >100 lumen/watt. c) The luminaries should be of IP 66 protection. d) Input Voltage: 140 V – 270 Volt, 50 Hz. A.C. supply. e) Driver should have in-built protection against high voltage surge, Open circuit & short circuit. f) Housing: Die-cast aluminium housing with epoxy powder coating and having cooling fins for effective heat dissipation. Separate Cavity for driver & LED lamp. g) Third party test report from NABL accredited laboratory of LM-79, LM-80 & IP-66. h) Product warranty: 5 Years. details schedule in Annexure-VI (Make: PHILIPS LIGHTING INDIA LTD./HAVELLS INDIA LTD./BAJAJ ELECTRICALS LTD)	No.	44		
2.	Supply & delivery of LED Flood Light of following specification: a) 150 W each set. b) Lumen output: >100 lumen/watt. c) The luminaries should be of IP 66 protection. d) Input Voltage: 140 V – 270 Volt, 50 Hz. A.C. supply. e) Driver should have in-built protection against high voltage surge, Open circuit & short circuit. f) Housing: Die-cast aluminium housing with epoxy powder coating and having cooling fins for effective heat dissipation. Separate Cavity for driver & LED lamp. g) Third party test report from NABL accredited laboratory of LM-79, LM-80 & IP-66. h) Product warranty: 5 Years. details schedule in Annexure-VI (Make: PHILIPS LIGHTING INDIA LTD./HAVELLS INDIA LTD./BAJAJ ELECTRICALS LTD)	No.	4		

3.	Supply & delivery of Hot Dipped Galvanized Iron Sheet Street Light Pole 9 Mtr. Long Swaged type with single swan neck to be extended up to 1.5 Mtr. at the top part of the pole. This specification covers the design, manufacture, testing at works of 9 mtr long (swaged type) Hot dip GI Steel tubular Pole conforming to IS: 2713 (P□I &II)/1980 (Confirming to 410-SP-26) with GI base plate and Single Swan neck arm Bracket and latest amendment if any.(Refer to the Specification and Drawing in Annexure-III and follow Rate submission form-IV). The rate should include testing at your works, all taxes and delivery the materials at different locations of HDA planning area, BIS license & Type test report must be submit. (Make: Utkarsh India Ltd/ Transrail Lighting Limited/ Bajaj Electricals Ltd/ Subham Pole Products Pvt. Ltd).	No.	44		
4.	Supply, delivery & installation of 12 M Height Hot Dipped Galvanized (BS EN ISO: 1461 2009) coated, hot rolled Sheet of non-structural alloy 3.0 mm thick (BSEN 10025) Octagonal/polygonal Mini-mast (single section) with monkey climbing arrangement and 1 no Full Moon Bracket suitable to mount 4 nos. of LED flood light fittings (with luminaries mounting plate and provision of passing wire) along with G I nut bolts, (IS 1367) in house Terminal arrangement with cover for cable loop-in and loop-out. (Refer to the Specification and Drawing in Annexure-IV). The rate should include testing at your works, all taxes and delivery the materials at different locations of HDA planning area.	No.	1		
5.	Supply and fixing of SPMCB "B" Curve (Make Legrand/Hager/L&T) 1 Amp to be placed on a din channel of Pole and supply and fixing of Terminal connector at the suitable location of the pole.	No.	45		
6.	Supply and fixing of Pole numbering Sticker (5" X 3") at the street light pole.)	No.	45		
7.	Lifting of the running Under Ground Cable coming to the looping cable Box upto the top of the muffing above the top of the ground level by drawing through 40 mm dia rigid pvc pipe of superior Quality and tiding the same by no 10 SWG G I wire with the pole including supply of pipe & wire & filling the top of the pipe/pipe hole with bitumen and neat cementing properly (average run- 1.5 mtrs/run X 2 runs per pole).	No.	45		
8.	Supply and delivery of 1.1 KV grade 4 C X 16 Sq. mm XLPE insulated and PVC sheathed aluminum armored Cable. As per IS 7098 Part -1 with latest amendment if any. The cable should have ISI mark. (Make: KEI, Havells, Gloster, Polycab)	Mtr.	1770		
9.	Supply and Installation of HDA printed logo suitable 15"×9" on GI Octagonal/tubular Pole, on brick foundation of meter box, feeder pillar box. (3 nos logo per/pole, per meter box, per feeder pillar box.)	No.	138		
10.	Laying of Cable by Jack push method through micro tunneling 2-3M deep under black top surface with excavation of double earth pit 1400×600×3000 mm on hard soil, laying of pipe, refilling and ramming of soil in earth pit, restoration of road surface etc. (Excluding the supply of GI Pipe)	Mtr.	20		

11.	<p>Supply, delivery, installation, testing & commissioning of single phase Feeder pillar box of size 1000 X 1000 X 400 mm made of 4 mm thick CRCA steel sheet or (G.I sheet of 2.5 m.m) with zinc powder coated outdoor type with top canopy, sides having lovers for ventilation, double door, complete with cu bus-bar, provision for installation of single phase meter at right side of the feeder pillar with individual locking arrangement as per direction of engineer-in-charge.</p> <p>(Consisting of following items in the feeder pillar)</p> <p>i) 40 Amp , 230 Volt Double Pole MCB 10 ka Breaking capacity -1 no</p> <p>ii) TP 240 Volt 40 Amp air break AC Coil contactor -1 no</p> <p>iii) Mechanical Time Switch of daily dial with battery backup -1 no</p> <p>iv) 16 Amp. SPMCB "B" Curve of 10 KA Breaking Capacity -4 no.</p> <p>v) Indicating LED Lamp (Gen Next LED Indicator 22.5 mm) -2 No</p> <p>vi) Cubical llu Lamp & Switch - 1 No.</p> <p>vii) 1 No Multifunction meter (Make:-</p> <p>viii) Toggle switch - 1No</p> <p>ix) Power Connector 4 Way 32 Amp -3 Set</p> <p>x) 1Ph Ammeter CI 0.5 with C.T</p> <p>xi) Copper Wire for internal wiring</p> <p>Installation of the feeder to be done by the earth cutting, brick soiling and cc foundation as required & sand filling, ramming and muffing around the feeder pillar box by brick and cement mortar work as per the direction of the Engineer-in-charge.</p>	No.	1		
12.	Supply and Installation of 10 KVA single phase CCMS (Centralized Control and Monitoring System) Inclusive of transportation, loading/ unloading, P&F, Transit Insurance, Handling, etc., with Micro process based controlled system with necessary MCB's, MCCB, timer, connectors and provision for energy meter etc., complete for finished item of work.	No.	1		
13.	Supply & delivery of GI earth Spike (1830 X 20 mm) (Each Pole).	No.	45		
14.	Earthing complete with driving of Earth Spik & connection of earth electrode with non-current carrying metallic parts of supports, stay.	No.	45		
15.	Connecting the equipments to earth busbar including S & F GI (Hot Dip) wire of size as below on wall/floor with staples buried inside wall/floor as required and making connection to equipments with bolts, nuts, washers, cable lugs etc. asrequired and mending good damages (ii) No. 6 SWG	Mtr.	90		
16.	Priming one coat on timber or plastered surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc. (0.35 sqm per pole x 46).	Sqm	16.1		
17.	Painting the vertical end faces of posts, wheel guards or railing or parapet with alternate bands of different colours as directed by the Engineer-in-charge with approved synthetic enamel paint (0.35 sqm per pole x46). (b)Two coats.	sqm	16.10		
18.	Laying of one No. cable upto 35 Sq. mm in underground trench 460 mm wide x 760 mm average depth, with brick protection on the top of the cable with 8 (eight) Nos. bricks per meter, including filling the space between the brick & cable and also the trench with shifted soil, leveling up and restoring surface duly rammed.	Mtr.	70		
19.	Supplying, laying of HDPE pipes, rates of HDPE pipes grade - PE80 (PN-10.0), OD-50mm and ID- 40.8mm, ISI Marked, Specification should be embossed on the HDPE Pipe.	Mtr.	1700		

20.	Labour of high density poly-ethylene pipes for below ground work including cost of jointing materials paints etc. fitting and fixing all necessary specials, cutting pipes, making threads, cutting holes in walls or R.C. floor where necessary and mending good all damages excluding the cost of masonry or concrete work, if necessary, but including the cost and fitting and fixing holder bat clamps (any floor) or for underground work including cutting trenches upto 1.5 metre (460 mm wide x 760 mm average depth) and refilling the same complete as per direction of the site engineer-in-charge.(Payment will be made on centre line measurement of the total pipeline including specials).	Mtr.	1700		
21.	Laying only Cable upto 50 sq.mm through existing RCC/Hume/ GI /HDPE Pipe/open masonry trench for single, 2, 3, 3½ & 4 core	Mtr.	1700		
22.	Fixing only LED Street Light/ Flood light Fitting with suitable tie clamps and MS plate for mounting on Pole/Tower or similar structure.	No.	45		
23.	Supplying and Fixing GI water proof looping cable box having hinged GI Top Cover having 4 mm thick with rubber gasket lining, railway type mechanical locking arrangement, earthing terminal with lug etc. The following sizes as indicated below. (a) Looping cable box -250mm (H) X 200 mm (W) x 100mm (D). (b) 2nos X 25mm X 6mm G.I clamp complete with bolts and nuts etc. as required for fastening looping cable box with the pole including providing drilled holes for cable entry and street light wiring.	No.	44		
24.	Connection of luminaries with 3C X 1.5 Sqmm PVC insulated FR copper conductor through 9 mtr. Tubular Poles from looping box to light fittings as required.	No.	45		
25.	Erection of single steel tubular pole of length upto 9 mtrs. With sole plate in C.C. (6:3:1) foundation 0.6x0.6x1.91 mtrs. as to G.S. having 600x600x150 mm thick C.C. (4:2:1) base block below sole plate with jhama metal incl. C.C. (6:3:1) muffing 0.3 mtr. dia & 0.3 mtr. above ground level including 3 mm thick neat cemented finish & providing GI earth bolt after making drilled holes etc. on the pole & carriage of pole upto 1.6 km from store depot. to work site including filling up the excavated earth pit with shifted soil & ramming properly.	No.	44		
26.	Supply & fixing medium gauge GI Pipe (ISI-Medium) Protection with necessary fittings and jointing materials as required. 50 mm dia	Mtr.	20		
27.	Supplying and fixing compression type gland complete with brass gland, brass ring & rubber ring for dust & moisture-proof entry of XLPE/PVC armoured cables as below: i) 4 core X 16 sqmm	No.	90		
28.	Finishing of the XLPE/PVC insulated armoured cable ends by soldering with cable sockets and insulated tapes etc., including supplying sockets, soldering materials, tapes etc. and making connection to switch, BDB and BBC etc. i) 4 core X 16 sqmm	Set	90		
29.	Supply & fixing of GI (Hot Dip) strips 20 mm x 3 mm thick for vertical run on wall with GI saddles spaced not exceeding 1000 mm apart incl. mending good damages to building work	Mtr	10		
30.	Earthing with 65 mm dia GI pipe (TATA-Medium)x 3.0 Mts. long and 1 No. 50 mm x 6 mm galvanized (Hot Dip) steel strip (4 Mts. long), 20 mm dia x 125 mm long galvanized bolt, double nuts, double washers including finishing both ends by making holes etc. and S & F 65 mm dia GI pipe (ISI-Medium) protection (3 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level to an average depth of 3.65 Mts, For Soft Soil.	No.	4		

31.	Excavation of soil for installation of Earth Electrode and filling & ramming. (a) For Soft Soil	Cu mtr.	12		
32.	Extra for providing masonry enclosure on the top of the earth electrode of overall size 86.36 cm x 86.36 cm x 46 cm deep(below Ground level) complete with cemented brick work(1:6) of 25 cm width duly plastered with cement mortar (inside) CI hinged inspection cover of size 36.56 cm x 35.56 cm with locking arrangement, GI reducer including drilling of 46 nos.12 mm dia holes on the GI pipe	Item	4		
33.	Supplying and fixing 240/415 V MCB of Breaking capacity 10kA & C characteristics on din rail of existing DBs and necessary connection. DP 10Amps.	No.	1		
34.	RCC Foundation for 12mtr mini mast as per the enclosed drawing and details schedule in Annexure-V .	No.	1		
35.	Providing and fixing typical citizen information board constructed with BFS, PCC, 250 mm & 125 mm brick wall (1:4) with necessary 15 mm thick plastering (1:4) & rule pointing, including supply & fixing of white marble stone (1100mm X 800mm X 18mm) with black colour engraved lettering as per the enclosed drawing.	No.	3		
				Total Amount (In Rs.)	
Total Amount in words:					

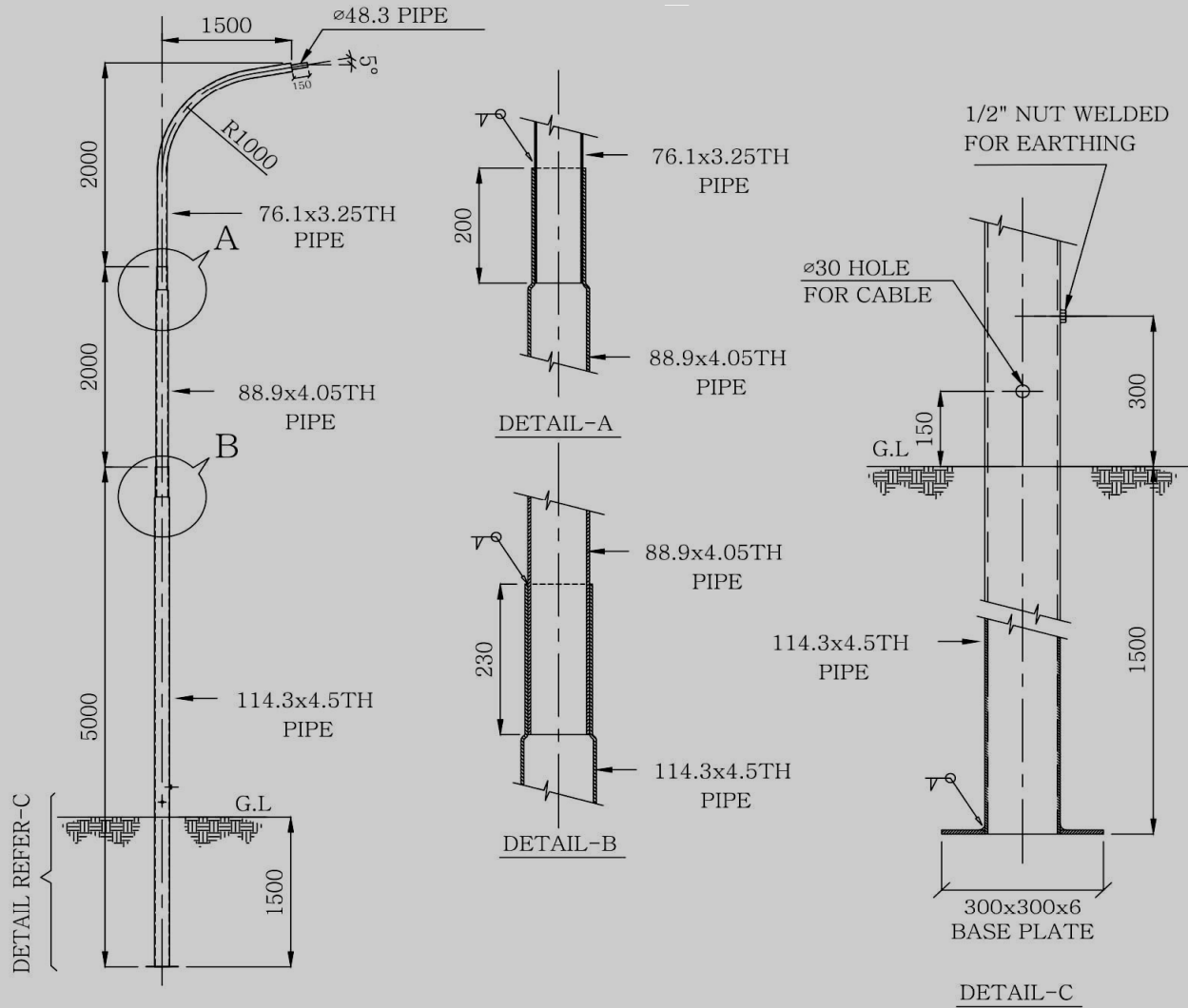
**Signature of authorized person of the bidder
(With office seal)**

Note: The bidder should signed and sealed all the pages

ANNEXURE-III

STREET LIGHT POLE:

Technical specifications and drawing of Hot Dipped Galvanized Iron Sheet Street Light Tubular Pole 9M Long Swaged type with single swan neck to be extended up to 1.5M at the top part of the pole.



NOTE:-

1. ALL DIMENSIONS ARE IN mm
2. TOLERANCE AS PER IS 2713 : 1980
3. POLES WILL BE HOT-DIP GALVANIZED
THE BEND PORTION OF THE POLE WILL BE
WELDED AFTER GALVANIZATION & ZINC RICH
PAINT WILL BE APPLIED AT THE AFFECTED
PORTION

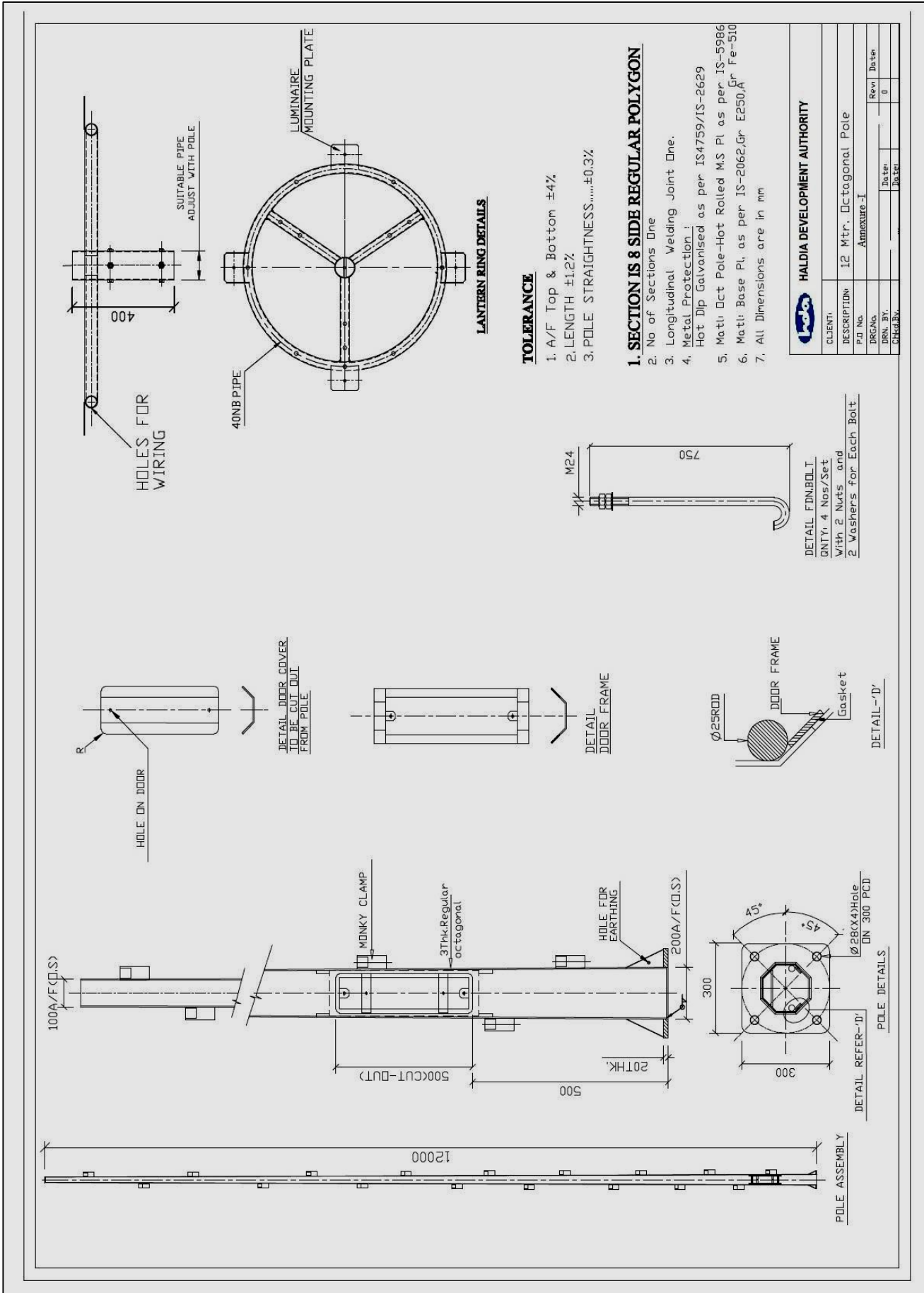
ANNEXURE-IV

MINI-MAST POLE:

Technical specifications and drawing of 12 M Height Hot Dipped Galvanized, hot rolled Sheet of non-structural alloy 3.0 mm thick Octagonal/polygonal Mini-mast (single section) with monkey climbing arrangement and 1 no Full Moon Bracket suitable to mount 4 nos. of LED flood light fittings.

Design	The Octagonal Poles shall be designed to withstand the maximum wind speed as per IS 875. The top loading i.e. area and the weight of fixtures are to be considered to calculate maximum deflection of the pole and the same shall meet the requirement of BSEN 40-3-3:2003 .
Pole Shaft	The pole shaft shall have octagonal cross section and shall be continuously tapered with single longitudinal welding. There shall not be any circumferential welding.
	All octagonal pole shafts shall be provided with the rigid flange plate of suitable thickness with provision for fixing 4 foundation bolts. This base plate shall be fillet welded to the pole shaft both inside and outside.
Door opening	The octagonal Poles shall have door of approximate 500 mm length at the elevation of 500 mm from the Base plate. The door shall be vandal resistance and shall be weather proof to ensure safety of inside connections. The door shall be flush with the exterior surface and shall have suitable locking arrangement. There shall also be suitable arrangement for the purpose of earthing. The pole shall be adequately strengthened at the location of the door to compensate for the loss in section.
Material	Octagonal Poles HT Steel Conforming to grade S355. Base Plate Fe 410 conforming to IS 2062 Foundation Bolts EN 8 grade Bracket ERW tubes as per IS 1161.
Welding	The welding shall be carried out confirming to approve procedures duly qualified by third party inspection agency. The welders shall also be qualified for welding the octagonal shafts.
Pole sections	The Octagonal Poles shall be in single section. There shall not be any circumferential weld joint.
Bracket Arm	The bracket will have a sleeve as cap of suitable diameter fitted with pinching bolts. The length of bracket shall be as per illumination design.
Galvanization	The poles shall be hot dip galvanized in single dipping as per BS EN ISO 1461 standards with average coating thickness of 70 micron.
Fixing Type	The Octagonal Poles shall be bolted on a pre-cast foundation with four foundation bolts for greater rigidity.
Top Mountings	The galvanized mounting bracket shall be supplied along with the Octagonal Poles for installation of the luminaries
Manufacturing	The pole manufacturing & galvanizing unit shall be ISO 9001:2000.
Galvanizing Facility	The manufacturing unit shall have in-house galvanizing facility as per standard.
Pole Testing Facility	The manufacturing unit shall have in-house pole testing facility for validation of structural design data.

❖ **Mini-Mast Drawing:**



**DETAILED TECHNICAL SPECIFICATION OF OCTAGONAL HOTDIP GALVANISED MINI MAST
POLES (COMPLETE SET).**

Structure:

Poles shall be continuously tapered OCTAGONAL cross section, presenting a good and pleasing Appearance and based on proven design conforming to Indian standards, to give an assured Performance and reliable service. The pole shall be suitable for wind loadings as per IS 875 part 3 1987.

Applicable Standards:

- a) IS 875 (Part III) 1987 : Code and practices for design loads for structures
- b) BS 51351 AWS : Welding
- c) Material for Pole Shaft : As per IS 5986 Gr.510 or Equivalent
- d) Material for Base Plate : As per IS 2062 Gr.410 or Equivalent
- e) Metal protection : Hot Dip Galvanization as per IS 4759 or equivalent

Climatic Conditions of the Installation:

- a) Max. Ambient Temperature : 50 ° C
- b) Max. Daily average ambient temp. : 40 ° C
- c) Min Ambient Temperature : 0 ° C
- d) Maximum Humidity : 95%
- e) Minimum Humidity : 10%
- f) Average No. of thunderstorm per annum : 50
- g) Average Annual Rainfall : 750 mm
- h) Average No. of rainy days per annum : 60
- i) Rainy months : June to Oct.
- j) Altitude above MSL not exceeding : 300 meters.
- k) Max.Wind Pressure : 210 km ph.

Pole Description & the Requirement:

SL	Description	Requirement
1	Height of Octagonal Pole	12 Mtr.
2	No. of Sections	One
3	Material of construction	As per IS 5986 Gr.510 or Equivalent / Material for Base Plate - As per IS 2062 Gr.410 or Equivalent / Metal protection - Hot Dip Galvanization as per IS 4759 or equivalent
4	Thickness of Sheet	3 mm
5	No of Longitudinal seamless weld/section	One
6	No of Circumferential weld/Section	Nil
7	Cross Section of Pole	Octagonal
8	Base Dia and Top Dia meter	As per Drawing.
9	Metal Protection for the Pole	Hot Dip Galvanized
10	Method of Hot Dipping	Single Dipping
11	Average thickness of galvanization	60 microns (As per BSEN ISO 1461)
12	Height of the door opening from pole flange plate to the bottom of the door	500 mm
14	Type of Locking arrangement	Vandal resistant, weather proof with locking arrangement
15	Control	Arrangement of Terminal and MCB

A) BRACKET		
1.	Brackets	1 no Full Moon Bracket as per design.
2.	Minimum Overhang	1500 mm
3.	Construction	Squire GI Pipe of minimum Dia. 50-60 mm, Class B
4.	MONKEY Clamping Arrangement	As per design required with Supporting Clamp.
B) DYNAMIC LOADING		
1.	Basic wind speed	47 m/sec
2.	Hourly mean wind speed	23.27 m/sec
3.	Max. gust speed time	3 sec
4.	Factor of safety for wind load	As per relevant IS 875: 1987
5.	Factor of safety for other load	As per relevant IS 875: 1987
C) FOUNDATION DETAILS		
1.	Type of foundation	As per Annexure-V
2.	Size of concrete foundation	As per Annexure-V
3.	Details of foundation of G.I bolts and Nuts	4nos. J- bolt, 24mm dia. 750mm long, 12nos. of Nuts with 16nos. of washers EN 8 Grade Projected Bolt 125mm Length
4.	Base plate material	G.I.
5.	Base plate Dimension	As per Drawing.
6.	Thickness of the base plate	As per Drawing.
7.	PCD for foundation bolt	As per Drawing.
D) CABLE FOR INTERNAL WIRING		
1.	Type	1.1KV Flexible copper conductor, PVC insulated and sheathed Cable
2.	Material of conductor	Copper
3.	Conductor size	3 Core, 2.5 sq.mm

GENERAL CONSTRUCTION:

The Octagonal Pole shall be designed to withstand the maximum wind speed as per IS 875. The Octagonal Pole shall be designed using limit state principle. The limit states to be considered are: (i) Ultimate and (ii) Serviceability; based on a design wind speed with a return period of 25 years. The Octagonal Pole shall be of continuously tapered and shall be based on proven In-Tension design conforming to the standards referred above, to give an assured performance, and reliable service. The structure shall be suitable for wind loadings as per IS 875 (Part-III) 1987.

STRUCTURE:

The Octagonal Pole shall be of continuously tapered and shall be based on proven In-Tension design conforming to the standards referred above, to give an assured performance, and reliable service. The structure shall be suitable for wind loadings as per IS 875 (Part-III) 1987.

CONSTRUCTION:

The Octagonal Pole shall be manufactured using steel plates. The Pole shall be delivered in single section. The Pole shall have Octagonal cross section and shall be continuously tapered with single longitudinal welding. There shall not be any circumferential welding and pole shafts with more than one longitudinal weld shall not be acceptable. The welding of pole shaft shall be done by Submerged Arc Welding (SAW) process. The Pole shall be in one section. No site welding and bolted joints shall be done on the pole.

Monkey Clamping shall be provided as per design with Supporting Clamp; Bottom diameter and plate thickness shall be as per the structural design requirements. The detailed design calculation along with foundation details of the pole shall be submitted along with the Bid for approval by the Purchaser.

The Octagonal Pole shall be provided with fully penetrated flange, which shall be free from any lamination or incursion. The welded connection of the base flange shall be fully developed to the strength of the entire section. The base flange shall be provided with supplementary gussets between the bolt-holes to ensure elimination of helical stress concentration. The pole shall be designed to mount up to one Luminary Single overhang (SOH).

GALVANIZING:

For environmental protection of the pole the entire fabricated Octagonal Pole and all its accessories shall be hot dip galvanized internally and externally as per standards with an average coating thickness of minimum 65 micron. The galvanizing shall be done in single dipping only. Double dip-galvanized shafts with overlapping are not acceptable.

DYNAMIC LOADING FOR THE POLE:

The Octagonal Pole structure shall be suitable to sustain an assumed maximum reaction arising from a wind speed as per IS 875 (Part-III) 1987 and shall be measured at a height of 10m above ground level. The design life of the pole shall be minimum of 25 years.

BRACKETS:

The arm bracket shall be hot dip galvanized. Single Overhang bracket shall be used and made up of 60mm GI pipe (class-B).

EARTHING TERMINALS:

Suitable single earth terminals using stainless steel bolt shall be provided at bottom of the base flange of the Pole.

FOUNDATION:

The foundation arrangement shall be done as per the attached Drawing and specifications at Attachment-I.

TESTS:

All routine, acceptance & type tests shall be carried out in accordance with the relevant standards. All routine/acceptance tests shall be witnessed by the purchaser/his authorized representative. All the components shall also be type tested as per the relevant standards.

TYPE TEST CERTIFICATES:

The Bidder shall furnish the type test certificates of the Octagonal Poles for the tests as per the corresponding standards along with this tender.

PRE-DISPATCH INSPECTION:

The pole shall be subject to inspection by a duly authorized representative of the HDA. Inspection may be made at any stage of manufacture at the option of the purchaser and the pole if found unsatisfactory as to workmanship or material, the same is liable to rejection. Bidder shall grant free access to the places of manufacture to HDA representatives at all times when the work is in progress.

Following documents shall be sent along with material:

- a) Test reports.
- b) Invoice In duplicate.
- c) Packing list.
- d) Drawings & catalogue.
- e) Guarantee / Warrantee card.
- f) Delivery Challan.
- g) Other Documents (as applicable).

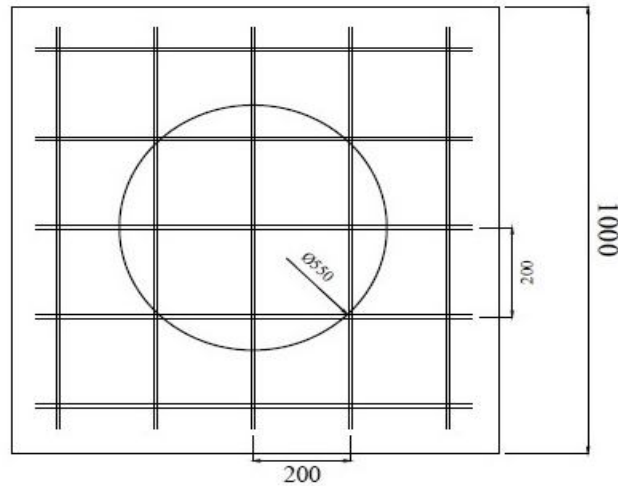
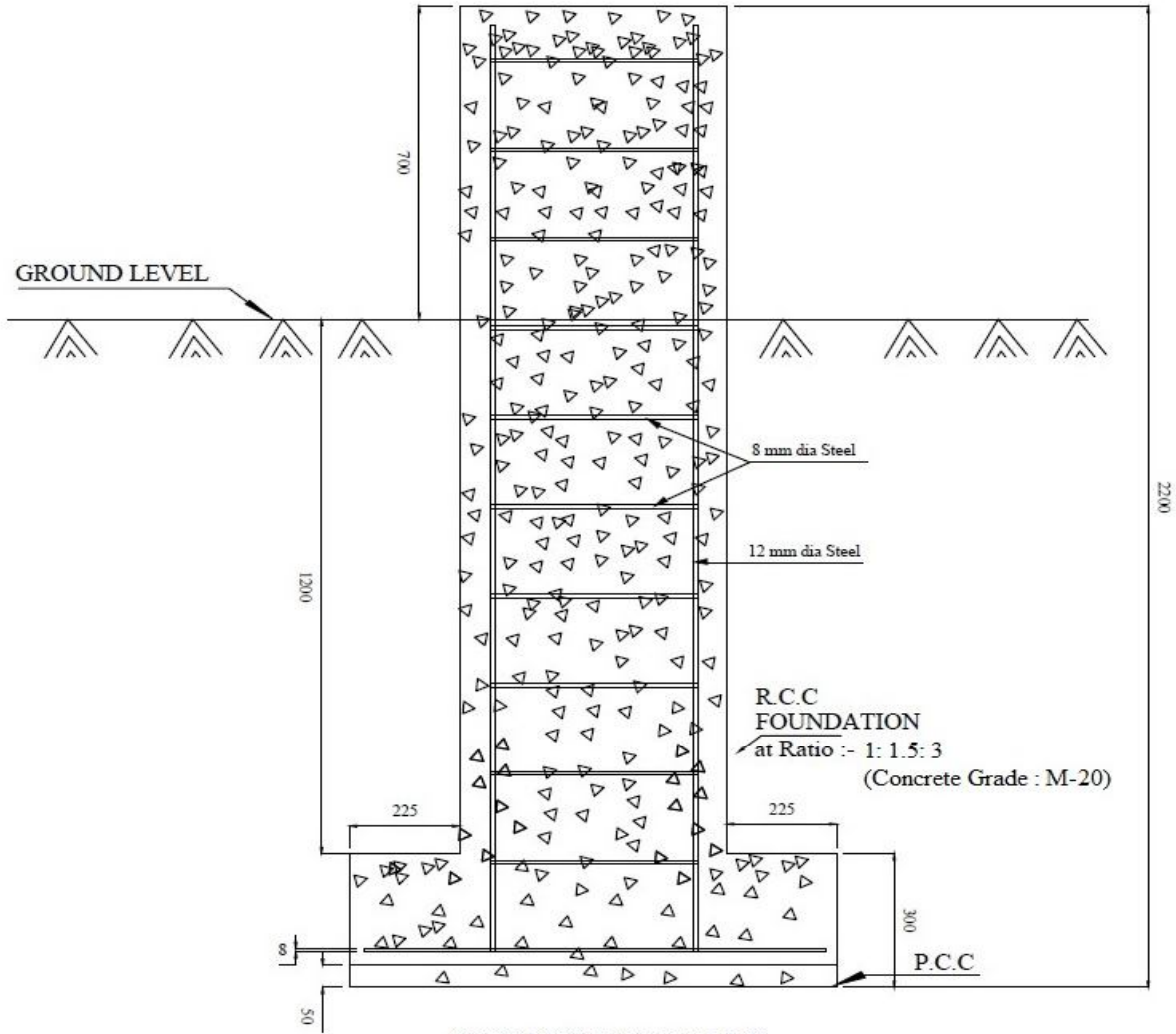
GUARANTEE:

Bidder shall stand guarantee towards design, materials, workmanship & quality of process / manufacturing of items under this contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Purchaser up to a period of at least 5 years from the date of commissioning Bidder shall be liable to undertake to replace/rectify such defects at its own costs.

AUTHORIZATION FROM THE POLE MANUFACTURER:

Authorization and acceptance of the above specification of the pole Manufacturer have to be submitted along with this tender.

ANNEXURE-V



ALL DIMENSION ARE IN MM

ANNEXURE-VI

Technical Specifications of LED Light Fittings (Complete Set)

A. GENERAL SPECIFICATIONS:

- I. Supply of 90W LED Street light and 150W LED Flood Light luminaries with integral driver and complete with pressure die cast aluminium housing with supplier word mark/ name engraved/ embossing on the die cast housing to allow traceability till life of fixture (Stikering/ Printing is not acceptable) and adhering to the following specification: Dimmable property is applicable for the luminaries of rating 90W and above.
- II. The fixture shall be designed so as to have lumen maintenance of at least 70% at the end of 50,000 hours.
- III. The luminaries should be operable with auto adjustable 140-270V supply voltage using the same driver.
- IV. Power factor of the electronics driver should be at least 0.95 with THD<10% and efficiency of the driver more than 85%.
- V. The luminaries should throw the perfect amount of uniform light with exactly the desired intensity and other best pole spacing, along with better light control.
- VI. The luminaries shall employ individual/ Matrix optical secondary pea nut lens for the each of the LED to ensure better uniformity of light distribution. The average minimum lux level should be as per IS but not less than 20 Lux and maintaining uniformity 0.3.
- VII. The fixture should be impact resistant with suitable protection by using cover for driver and LED's, conforming to minimum IK05 impact resistance specifications.
- VIII. The fixture should be designed for IP-66 ingress protection.
- IX. Heat dissipation should be managed through a built-in external heat sink. The luminaries shall deliver minimum 100 lumen/watt, colour rendering index of minimum 75 with cool white light output.
- X. The LED should be of modular design and module should be replaceable in case of any defect by the manufacturer.
- XI. LED driver should be inbuilt potted silicon/ Asphalt filled (Compulsory for the fixture above 45 W). Both luminaries and electronic driver must be BIS certified. Make of LED, luminaries and electronic driver should preferably of same manufacturer.
- XII. In case of LED and it's electronics drivers are from different manufacturer, agency must have furnished guarantee of it's successful operation.
- XIII. Make of Chip: CREE/ NICHIA/ LUMILEDS/ OSRAM/SEOUL/ SAMSUNG.

B. ELECTRICAL SPECIFICATIONS

Sl. No.	Electrical Specification	Ratings
Electrical ratings of the proposed luminaries product for the following criteria:		
01	Voltage range or rating	140V to 270V AC on single phase
02	System lumens per watt	>100
03	Frequency Range (+/- 5%)	50Hz
04	Power Factor	≥ 0.95
05	Driver Current	350mA to 750mA
06	Colour Temperature	≥ 5500K

07	CRI	> 70%
08	Life Expectancy	50000 hrs with 70% Lumens.
09	Total input wattage to the fittings including driver losses	90W for LED Street Light and 150W for LED Flood light
10	Ingress Protection level	IP66
11	Total Harmonic distortion	< 10%
12	Surge Protection	10KV, 10KA
13	Operating Temperature	-20°C to +35°C

C. CONFORMANCE STANDARDS:

All bidders need to furnish the following details:

- I. The Luminaries shall conform to IEC 60598 standard and the driver should comply with IEC 61347-2-13 for safety, IEC 61547, CISPR-15, AND 610-3-2 for EMC.
- II. Luminaries should be tested as per BIS 10322 and IEC 60598 standards and following test reports should be submitted along with the tender: Heat Resistant Test, Electrical Insulation resistance test, Endurance Test, Humidity Test, and Electronics Test.
- III. For Luminous efficacy and light output, Photometry Test of the Luminaries LM79 (**Third party**) reports from NABL Accredited Laboratory to be submitted along with tender.
- IV. Lighting level should be as per **IS1944** standard A2 category of road. [IES file have to be submit for checking the point.]
- V. Documents of BIS certification for both driver and luminaries are to be submitted.
- VI. In house testing lab certificate by the manufacturer. The certificate or report must be validated from a third-party lab which is accredited by NABL/ Central Govt.
- VII. LM79 report should be provided by the manufacturers from NABL accredited Laboratory or UL certification for photometry and electrical testing report.
 - a) LM79 report to be submitted against each category of luminary from a NABL Accredited 3rd Party Laboratory along with the type test certificate validate by a third-party lab accredited by NABL/Central Govt. for the individual product batch no. which are to be submitted against the current/ instant tender.
 - b) At least 100 Lumen per watt efficacy certification of the product.
 - c) Total wattage of the consumption should be mentioned.
- VIII. The manufacturer should submit the safety standards as per EN 60598, EMC/EMI Standards as per EN61547/EN 55015 and EN 61000-3-2 & 61000-3-3 for Harmonics.
- IX. Manufacturer/tenderer/bidder should provide the certificate of LM80 report directly from the LED chip manufacturer (CREE, LUMILEDS, OSRAM, NICHIA, SEOUL, and SAMSUNG).
- X. The Manufacturer/tenderer/bidder should submit the following in-house testing facility along with bid for quality checks:
 - a) Test Bench for EMI/EMC measurement.
 - b) Test Bench for High voltage, Surge, Burst & Voltage dips.
 - c) Test chamber for humidity and temperature of environment testing.
 - d) Photometry Laboratory with Gonio photometer and/ or Integrating sphere for complete light fixtures to be able to create IES files.
- XI. The manufacturer should have experience of manufacturing of LED Lights for at least 5 years.
- XII. 5 years warranty certificate to be submitted by manufacture against the batch no. to be supplied after award of the job.

- XIII. Manufacturer should submit the certificate of over voltage and low voltage protection report from own electrical lab.
- XIV. The manufacturer to be certified that the product should be in-built surge protection of 4 KV to 6KV and separate external surge protection should be provided not less than 10 KV for street light luminaries and 10KV to 15KV for flood light integral to same housing.
- XV. The product should supply having aluminium pressure die cast/ Aluminium extruded heat sink should provide by the manufacturer.
- XVI. Lighting design of the road for Mini-mast or Street lighting with Lux level calculation should be submitted by the manufacturer as per National Lighting Code (NLC) SP-72-2010. For this purpose the tendering authority shall provide detail drawing/road map along with the tender document, specially for the new installation work.
- XVII. Contractor should provide SPD (Surge Protection Device) in feeder pillar or panel as per guidelines of OBO.
- XVIII. The manufacturer should have in house design and development facility for LED lights and for electronic drivers.
- XIX. The manufacturer should have an in-house manufacturing capability for LED lights, including for the manufacturer of electronic drivers.
- XX. The product should meet Safety Standards as per EN 60598, EMC/EMI standards as per EN61574/EN 55015 and EN 61000-3-2 & 61000-3-3 for Harmonics. The LED's shall comply with Photo Biological Safety norms as per IEC 62471/EN62471/IS: 16108 and should fall in exempt or low risk group for outdoor LED Luminaries.
- XXI. The electronic driver should work in the short circuit and open circuit conditions and should work in the voltage range 140V to 270Volts.

D. TESTING FACILITIES

To ensure type testing of the products and to have quality control measures the manufacturers should have following in-house testing facilities, R&D facility:

- a) Glow wire Test.
- b) HV Tester.
- c) Adequate number of electrical meters for measurement of different electrical parameters.
- d) Megger (500Volt).
- e) Tracking Test.
- f) Resistance to Heat Test.
- g) Measuring gauges such as Vernier Caliper, Micrometer, and Dial gauges.
- h) Non contract IR based digital thermometer.
- i) Harmonic analyzer and THD meter.
- j) Digital weighting machine.
- k) Power Analyzer.
- l) Surge Tester.
- m) Temperature simulation facility to test various temperature parameters.
- n) Ingress protection test facilities for dust and water jets.
- o) Transportation Drop Test.
- p) Vibration Test.
- q) Humidity Test.
- r) Electronically controlled Gonio Photometer/ Integrating Sphere for complete Light fixture.