

Agricultural Produce Marketing Committee

Market of National Importance

(Govt. of NCT. of Delhi)

Office Complex, MNI Azadpur, NFM Ph-I I, Sarai Pipal Thalla, Azadpur, Delhi-110033

Phone No. 27401086-88, 27401009. Fax No.27691668

N.O.W. :- Supply, installation, testing & commissioning of high mast and street light poles at Fruit & Vegetable Market, Okhla.

ITEM RATE TENDER AND CONTRACT FOR WORK

INDEX

S. No.	Description	Page No.
1.	Press Notification	2
2.	Notice Inviting Tender (PWD – 6)	3
3.	Tenders form CPWD-8	6.
5.	Correction Slip & Fair wages schedule	12
6.	Terms & Conditions	13
7.	List of approved makes	15
8.	Technical Data Sheet for 16 mtr High Mast	16
8.	Schedule of Quantities	19

This NIT contains 20 pages marked as Sl. No. 1 to 20

Executive Engineer (E)
APMC Azadpur.

AGRICULTURAL PRODUCE MARKETING COMMITTEE

(Market Of National Importance)

New Office Complex, NFM- Ph.-II, Sarai Pipal Thalla, Azadpur, Delhi-33.

NOTICE OF E-TENDERING

Item rate e-tenders are invited for the under mentioned works on behalf of Secretary, Agricultural Produce Marketing Committee, Azadpur and opened online in the office of Secretary, APMC, Azadpur.

S.N o.	Tender ID	Name of Work	Estimated Cost/ Earnest money (In Rupees)	Last Date &Time for Receipt of Tenders
1.	2018_DAMB_	Supply, installation, testing & commissioning of high mast and street light poles at Fruit & Vegetable Market, Okhla.	6,81,800/- 13,636/-	28.06.18 up to 13.00 hours
2.	2018_DAMB_	Electrification of Auction platforms, street light & High mast tower at F & V Market, Okhla.	6,99,609/- 14,000/-	28.06.18 up to 13.00 hours
3.	2018_DAMB_	Temporary electrification of shed no.7 i/c fixing of LED flood lights & Dala street light fixtures, air circulator bracket fans in shed at NFM Azadpur.	<u>13,22,266/-</u> 26,445/-	29.06.18 up to 13.00 hours
4.	2018_DAMB_	Electrification of shed no.16 i/c fixing of LED flood lights & Dala light fixtures in shed at NFM Azadpur.	<u>12,98,843/-</u> 25,976/-	29.06.18 up to 13.00 hours
5.	2018_DAMB_	Operation & Maintenance of all types of Electrical fixtures, Street Light, Flood Lights & High Masts in NFM/NSM and comprehensive AMC & operation of fans, pump sets, located at cement Godown & Gole pump house in NFM Azadpur.	<u>24,50,586/-</u> 49,015/-	30.06.18 up to 13.00 hours

Date of release of tender through e-procurement solution:

Further details can be seen at website <https://govtprocurement.delhi.gov.in>

Executive Engineer (E)
APMC, AZADPUR

NOTICE INVITING TENDER

Sealed item rate tenders in two bid system (Technical Bid & Financial Bid) are invited by e-tendering for the under mentioned work on behalf of Secretary, Agricultural Produce Marketing Committee, Azadpur from the approved & eligible contractors of CPWD, MES, DDA, NDMC, BSNL, MTNL, DJB, I&FCD and Railways, who have adequate past experience of the works for similar nature and completed successfully at least three works of similar nature and magnitude equivalent to the 40% of the estimated cost or two works of 60% of estimated cost or one work of 80% of estimated cost as during the last seven years in central Govt. / State Govt. / Central Govt. autonomous bodies. The tenders will be opened in the office of the Secretary, APMC, New Office Complex, NFM- Ph.-II, Sarai Pipal Thalla, Azadpur, Delhi-33, in the presence of tenderers or their authorized representatives who may like to attend.

N.O.W. :- Supply, installation, testing & commissioning of high mast and street light poles at Fruit & Vegetable Market, Okhla.

Estimated Cost: **Rs 6,81,800=00**

Earnest Money: **Rs 13,636=00**

1. List of Documents to be scanned and uploaded within the period of bid submission:-

- (i) Scanned copy of Earnest Money. However, Earnest Money in original is to be submitted in the office of Secretary, APMC, New Office Complex, NFM- Ph.-II, Sarai Pipal Thalla, Azadpur, Delhi-33 as mentioned in the Para 5 below.
 - (ii) Scanned copy of GST Registration Certificate.
 - (iii) Scanned copy of PAN Number as issued by Income Tax department.
 - (iv) Scanned copy of Valid Registration Certificate of appropriate category.
 - (v) Scanned copy of experience certificates issued by the concern department.
 - (vi) Scanned copy of Contractor Electrical License issued by the concern department.
 - (vii) Original mode of Earnest Money Deposit (EMD) of **Rs. 13,636=00 (Rupees thirteen thousand six hundred thirty six only)** in favour of APMC, Azadpur as stated above shall have to be submitted to the Secretary, APMC, Azadpur in sealed envelope with name of work written on the envelope up to **14.30 Hrs on dated 23.06.18**. Failure to furnish the original mode of earnest money on the due date and time will entail rejection of bid.
2. The tenders can be uploaded on website up to **14.30 hours on 23.06.18**.
 3. The bidder shall sign on all the statements, documents, certificates uploaded by him owning responsibility for their correctness/authenticity.
 4. Earnest money **Rs. 13,636=00** in the form of Deposit at Call receipt of a scheduled bank/ demand draft of a scheduled bank issued in favour of, APMC, Azadpur. Xerox copy of the above is to be scanned and uploaded along with the tender and the original Receipt of Deposit at Call receipt of a scheduled bank/demand draft of a scheduled bank shall be deposited in sealed envelope with name of work and due date written on the envelope, in the office of Secretary, APMC, New Office Complex, NFM- Ph.-II, Sarai Pipal Thalla, Azadpur, Delhi-33. Failure to furnish the original Receipt of Treasury Challan / Deposit at Call receipt of a scheduled bank/demand draft of a scheduled bank will entail rejection of bid.
 5. The Technical Bids will be opened online on **23.06.18 at 15.00 hours** for scrutiny by the Executive Engineer (E), APMC, New Office Complex, NFM- Ph.-II, Sarai Pipal Thalla, Azadpur, Delhi-33. The technical bids will be evaluated against the specified parameters/ criteria and the result of technical evaluation will be displayed on the website <https://govtprocurement.delhi.gov.in> which can be seen by all the bidders who participated in the Tenders.
 6. The Financial Bids shall be opened later on, only for those tenderers who fulfill the

eligibility criteria and the required documents found in order under Technical bid, otherwise the financial bid shall not be opened. If any of the above dates happens to be holiday, the next working day will be considered for all purposes. Conditional tender shall not be considered.

7. Agreement shall be drawn with the successful tenderer on prescribed Form No. CPWD 8, which is available as a Govt. of India Publication. Tenderer shall quote his rates as per various terms and conditions of the said form, which will form part of the agreement.
8. The time allowed for carrying out the work will be **02 Months** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.
9. The site for the work is available or the site for the work shall be made available in parts.
10. Tender documents consisting of plans, specifications, the schedule of quantities of the various classes of work to be done and the set of terms & conditions of contract to be complied with by the contractor whose tender may be accepted and other necessary documents can be seen in the office of the Executive Engineer, (E) APMC, Azadpur, between hours of 11.00 AM & 04.00 PM every day except on Sundays and Public holidays. Tender documents, excluding standard form, can be downloaded from the website <https://govtprocurement.delhi.gov.in> free of cost and shall be uploaded on website alongwith the following: -
11. Tenders will be received through e-tendering only.
12. APMC reserves the right to reject any or all tenders without assigning any reason.
13. The contractor, whose tender is accepted, will be required to furnish performance guarantee of 5% (Five percent) of the tendered amount within the period specified in Schedule 'F'. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10,000/-) or Deposit at call receipt of any scheduled bank/ Bankers's Cheque of any scheduled bank/ Demand draft of any scheduled bank/Pay order of any scheduled bank or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.
14. The competent authority does not bind himself to accept the lowest or any other tender and reserves to himself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.
15. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
16. The competent authority reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
17. The contractor shall not be permitted to tender for works in the DAMB/APMC (responsible for award and execution of contracts) in which his near relative is posted as JAO/AAO/Account officer or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the DAMB or in the APMC. Any breach of this condition by the contractor would result in rejection of the tender submitted by him.
18. No Engineer of gazetted rank or other Gazetted officer employed in Engineering or Administrative duties in an Engineering Department of the Government of Delhi/India is allowed to work as a contractor for a period of two years after his retirement from Government service, without the previous permission of the Government of India in

writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.

19. The tender for the works shall remain open for acceptance for a period of **90** (Ninety) days from the date of opening of tenders. If any tenderer withdraws his tender before the said period or issue of letter of acceptance, which ever is earlier or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the APMC shall, without prejudice to any other right or remedy, be at liberty to forfeit entire the said earnest money as absolutely
20. This Notice Inviting Tender shall form a part of the contract document. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work sign the contract consisting of: -
 - a) The notice inviting tender, all the documents including additional conditions, specifications and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
 - b) Standard. C.P.W.D. Form 8 - Corrected / modified upto date.

Signature of Executive Engineer(E)

APMC, Azadpur*

For & on behalf of Secretary APMC, Azadpur * To be filled by Executive Engineer

Agricultural Produce Marketing Committee

Market of National Importance

(Govt. of NCT. of Delhi)

Office Complex, MNI Azadpur, NFM Ph-II, Sarai Pipal Thalla, Azadpur, Delhi-110033

Phone No. 27401086-88, 27401009. Fax No.27691668

ITEM RATE TENDER & CONTRACT FOR WORKS

Tender for the work of “**Supply, installation, testing & commissioning of high mast and street light poles at Fruit & Vegetable Market, Okhla.**”

(i) To be submitted by 13:00 hours on **23.06.18**

To be opened in presence of renderers who may be present at 1500 hours on **23.06.18** in the office of Executive Engineer (E) APMC, Azadpur.

Issued to: - ** (Contractor)

Signature of officer issuing the documents **

Designation: - **Executive Engineer (E)**

Date of Issue: - ** ** to be filled by EE

TENDER

I/We have read and examined the notice inviting tender, schedule A, B,C,D,E & F, applicable specifications, Drawings & Designs, General Rules and Directions, Conditions of Contract, Clauses of Contract, Special Conditions, Schedule of Rate & other documents and Rules referred to in the condition of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the President of India within the time specified in Schedule "F", viz., schedule of quantities and in accordance in all respects with the specifications, design, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause-11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

I/We agree to keep the tender open for **ninety (90) days** from the due date of submission thereof and not to make any modification in its terms and conditions.

A sum of **Rs. 13,636=00 (Rupees thirteen thousand six hundred thirty six only)** has been deposited in the form of Receipt of Treasury Challan/Deposit at call Receipt of a Scheduled Bank / Demand Draft of a Scheduled Bank as earnest money. If I/ We fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said President of India or his successors in office shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence the work as specified, I/We agree that President of India or his successors in office shall, without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations, as may be ordered, up to maximum of the percentage mentioned in Schedule "F" and those in excess of that limit at the rates to be determined in accordance with the provision contained in clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture of Earnest Money or both Earnest Money and performance guarantee as aforesaid, I / We shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of

Department, then I/we shall be debarred for tendering in DAMB/APMC in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

I/We hereby declare that I/We shall treat the tender documents, drawings and other records connected with the work as secret / confidential documents and shall not communicate information / derived there from to any person other than a person to whom I/We am / are authorised to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated*

Signature of Contractor *

Postal Address *

Witness:

Address:

Occupation:.....

...* to be filled by the Contractor

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the President of India for a sum of Rs.....**
(Rupees.....**).

The letter referred to below shall form part of this agreement: -

a)

b)

c)

}**

For & on behalf of the Secretary, APMC, Azadpur, Delhi

Signature.....**

Designation: - EXECUTIVE ENGINEER (E)

Dated.....**

.....** to be filled by EE

SCHEDULES

SCHEDULE 'A'

Schedule of Quantities: - Attached at page to

SCHEDULE 'B'

Schedule of materials to be issued to the contractor:

Sl. No.	Description of Item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of Issue
1	2	3	4	5
-----NIL-----				

SCHEDULE 'C'

Tools and Plants to be hired to the contractor

Sl. No.	<i>Description</i>	Hire charges per day	Place of issue
1	2	3	4
-----NIL-----			

SCHEDULE 'D'

Extra schedule for specific requirements / documents for the work, if any. ---Nil---

SCHEDULE 'E'

Schedule of component of Cement, Steel, Other Materials, Labour etc. for Price escalation.

CLAUSE 10 CC

---Not applicable

SCHEDULE 'F'

Reference to General conditions of contract: -



Name of Work: - Supply, installation, testing & commissioning of high mast and street light poles at Fruit & Vegetable Market, Okhla.

- (i) Estimate cost of Work : - **Rs. 6,81,800=00**
(ii) Earnest Money : - **Rs. 13,636=00**
(iii) Performance Guarantee: - 5% of the tendered value of work.
(iv) Security Deposit : - 5% of the tendered value of work.

GENERAL RULES

AND DIRECTIONS : Officer Inviting Tender Executive Engineer (E)

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3.

Definitions:

- 2(i) Engineer-in-Charge Executive Engineer (E)
2(vii) Accepting Authority **Secretary, APMC, Azadpur**
2(x) Percentage on cost of materials and labour to cover all overheads and Profits. **15%**
2(xi) Standard Schedule of Rates **DSR-2014 and Market Rates**
2(xii) Department **APMC, Azadpur**
9(ii) Standard CPWD Contract Form **CPWD form 8 -2014, as modified and Corrected up to date.**

Clause 1

Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance. **15 days**
Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above. **7 days**

Clause 2

Authority for fixing compensation under Clause-2 } **Secretary, APMC, Azadpur** or his authorised representative

Clause 5

- i) Time allowed for execution of work : - **02 Months**
ii) Authority to give fair and reasonable extension of time for completion of work. : - **Secretary, APMC, Azadpur**

Clause 7

Gross work to be done together with net payment/adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment.

Clause 11

Specifications to be followed for As per CPWD Specifications as amended

Execution of work.

upto date correction and as preterm conditions attached.

Clause 12

12.1.2(iii) Schedule of rates for determining rates for additional, altered or substituted items that cannot be determined under 12.1.2(i) & (ii)	Deleted
12.1.2 (iii) Plus/minus the % over the rate entered in the schedule of rates	Deleted
12.12 (vi) Deviation limit beyond which sub-clauses (i) to (ii) shall not apply and Clause 12.2 & 12.3 shall apply.	Deleted
12.1 (vi) Limit for value of any item of any individual trade beyond which sub-clauses (i) to (v) shall not apply and clauses 12.2 & 12.3 shall apply for foundation work.	Deleted
Clause 12.2 & 12.3 Nil	Deviation limit beyond which clause 12.2 & 12.3 shall apply for building work.....
Clause 12.5 Nil	Deviation limit beyond which clause 12.2 & 12.3 shall apply for foundation work.....

Clause 16

Competent Authority for deciding reduced rates.

Executive Engineer(E)

Clause 36

- (i) Minimum qualifications & Experience required for Principal Technical Representatives.

- (a) For works with estimate cost put to tender more than
i) Rs.10 lakhs for civil work
ii) Rs.5 lakhs for elec/mach works

Graduate or retired AE possessing at least recognised diploma

- (b) For works with estimated cost put to tender
i) More than Rs.5 lakhs but less than Rs.10 lakhs for civil works
ii) More than Rs.1 lakhs but less than Rs.5 lakhs for Elect/Mech works

Recognised Diploma holder

Recognised Diploma holder

- (ii) Discipline to which the Principal Technical Representative should belong.

Civil/Elect./Mech.

- (iii) Minimum experience of works.
(iv) Recovery to be affected from the Contractor in the event of not fulfilling provision of clause 36 (i)

Five Years
Rs.20,000/-per month for graduate.
Rs.15,000/- per month for diploma holder.

Clause 42

i) (a) Schedule/statement for determining theoretical quantity of cement & bitumen on basis of Delhi Schedule of Rates _____ printed by CPWD.

ii) Variations permissible on theoretical quantities:-

a) Cement for works with estimated Cost put to tender not more than Rs.5 lakhs

: **2% (Two Percent) Plus/Minus**

For works with estimated cost put To tender more than Rs.5 lakhs

2% plus/minus.

b). Bitumen for all works

: **2.5% plus only and NIL on minus side**

c). Steel reinforcement and structural steel sections for each diameter, section and category

: 2% plus/minus

d) All other material

: **NIL**

S. No.	Description of Item	Rates in figures and words at which recovery shall be made from the contractor.	
		Excess beyond permissible Variation	Less use upto the permissible variation
1	2	3	4

Material to be arranged by contractor:

- | | | |
|----|------------------------------|-----|
| 1. | Cement | NIL |
| 2. | Steel reinforcement | NIL |
| 3. | Bitumen issued free | NIL |
| 4. | Bitumen issued at stipulated | NIL |
| 5. | Fixed price. | NIL |

Signature of Contractor

CORRECTION SLIP

- (i) Wherever, there is a reference of CPWD officers it shall construed to mean officers and other staff of Agricultural Produce Marketing Committee as applicable therein.
- (ii) The reference of government in the tender form shall constructed to means Agricultural Produce Marketing Committee in connection with payments or other contractual implications. For all acts and regulations the reference of Govt. and the orders of government shall be followed.
- (iii) For corrections in PWD Form No.8 kindly refer English version only.
- (iv) The contractor shall obtain a valid license of the enrollment in Delhi Labour Welfare Board regarding contribution/statutory Deposit under the Bombay Labour Welfare Fund Act, 1953 as extended to NCT of Delhi. Contractor shall deposit all the statutory dues with the Delhi Labour Welfare Board directly.
- (v) In addition to Clearance Certificate from Labour Officer as per clause-45 of the General conditions of the Contract. The contractor has to produce a clearance certificate from "Welfare Commissioner. Delhi Labour Welfare Board for getting the Security Deposit of the work refunded.

FAIR WAGES SCHEDULE

The latest minimum fair wages schedule as in force in Delhi Admn. At the time of opening of tender shall be applicable.

Executive Engineer (E)
Agricultural Produce Marketing Committee

TERMS AND CONDITIONS

1. The work shall be carried out strictly in accordance with CPWD specifications for electric works 2013 Part-I (Internal) as amended upto date and in accordance with the Indian electricity act 1910 as amended upto date and as per instructions of the Engineer-in-Charge.
2. All materials to be used on this work by the contractor shall be got approved form the Engineer-in –Charge before installation at site.
3. **The drawing /design of control panel board/Distribution boards used in this work before fabrication/installation shall be got approved form the Engineer-in –Charge by the contractor.**
4. Any damage done to the building/road during the execution of electrical work shall be the responsibility of the electrical contractor and the same will be made good immediately at his own cost to the satisfaction of the Engineer-in-Charge. Any expenditure incurred by the department in this connection shall be recovered from the contractor and decision of the Engineer-in-Charge about recovery shall be final.
5. Bad work-man ship will not be accepted and defects shall be rectified at contractor's cost to the satisfaction of the Engineer-in-Charge. The progresses of electric work are to be coordinated in accordance with the building works and no claim for idle labour will be entertained by the department. In case civil work are completed earlier then the time stipulated in the tender electrical works shall have to the completed within 30 days of the date of completion civil work.
6. All the debris of the electrical works should be removed and the site should be cleared by the contractor immediately after the occurring of debris. Similarly any rejected materials should be immediately cleared from the site by the contractor, otherwise a. recovery @Rs 50/- per day shall be made.
7. Earthing & Cable lying shall invariably be done in the presence of the Engineer-in-Charge or his authorized representative.
8. The contractor or his representative is bound to sign the site order book as and when required by the Engineer-in-Charge and to comply with the remarks there in.
9. The contractor shall make his own arrangement at his own cost for electric/general tools and plants required for the work.
10. The entire installation shall be at the risk and responsibility of the contractor until these are tested and handed over to the department. However, if there is any delay in construction from the department side the installation may be taken over in parts but the decision on the same shall rest with Engineer-in-Charge which shall be binding on the contractor.
11. Not with standing the schedule of quantities all items of interrelated works considered necessary to make the installation complete and operative are deemed to be included shall be provided by the contractor at no extra cost.
12. The connection, interconnection earthing and inter-earthing shall be done by the contractor where as required to be done for energisation of the installation and nothing extra shall be paid on this account.
13. The contractor shall make his own arrangement for storage of materials either brought by him of issued to him by the department.

14. **Plastic nameplate or identification tags/slips shall be provided on the cubical panels/switchboard/DBS/wires to indicate the area fed by them.**
15. **All termination of cables sub main/circuit wires & copper/GI/Earth wires into switch board shall be done using/lugs/ferrules only & nothing extra shall be paid on this account. This condition shall not apply if wiring has been done with the solid single conductor wire.**
16. Central/state sales tax/contract tax/excise duty etc. should be included in the rates tendered statutory deduction of contract tax at source shall be made while releasing payment through running/final bills. A certificate specifying the rate and amount of deduction shall however be issued no from 'D' 31/32 (Road permit) shall be issued by the deptt. the road permit shall be arranged by the tenderer on his own.
17. Loss of life/damages/accidents etc at site, shall be the sole responsibility of the contractor and no compensation shall be payable by the department.
18. Recovery @1% on account of labour cess shall be made from the contractor's bill.
19. The execution of job shall be done in workman like manner to give structurally sound and neat appearance.
20. Watch and ward of the material up to commissioning and final handing over to department will be the responsibility of the firm. Nothing extra shall be paid.
21. The firms are advised to inspect the site before quoting the rates.
22. The contractor shall submit the foundation drawing of High Mast approved by a Structural Engineer before execution of work.
23. The contractor shall supply necessary test certificate from the manufacturer of High mast and other electrical items. The firm shall also provide one year guarantee of all the electrical items from the date of completion of work. The material should be as per approved makes and of ISI mark.

Executive Engineer (E)

LIST OF APPROVED MAKE

- | | |
|----------------------|---|
| 1. High Mast:- | Bajaj, Valmont, Utkarsh, Paruthi |
| 2. MCB | Crabtree, Legrand, ABB, L & T, C & S, Schneider |
| 3. MCCB | Havell's, Legrand, ABB, L & T, C & S, Schneider |
| 4. Switch/Socket | Anchor, Cona, Havell's |
| 5. Copper Wire/Cable | Havell's, Polycab, KEI, Finolex, Ecko |
| 6. Aluminium Lugs | JV 14, Action, Dowell's |
| 7. HDPE Pipe:- | Rex, Gwalior Poly pipes or other ISI Marked. |
| 8. Main Switch:- | Havells, Crompton, L&T |
| 9. Control panel :- | Havells, Crompton, L&T |

TECHNICAL DATA SHEET FOR 16 MTR HIGH MAST
SUITABLE FOR UP TO 6 NOS. FLOODLIGHT LUMINAIRES

S. No.	Description	Parameter
1	Overall Height of High Mast	16 Mtr.
a	Make	
b	Material of construction of Shaft	Grade S355 JO as per BSEN 10025 or equivalent
c	Cross section of Mast	20 sided, regular continuously tapered polygonal
d	Number of Sections	Two (2)
e	Thickness of shaft (mm)	Bottom section : 3mm Top section : 4mm
f	Length of individual section (mm)	8375mm / 8375 mm
g	Base dia & Top diameter	360 mm (A/F) and 150 mm (A/F)
h	Type of joints	Telescopic slip joint, Stress-fitted
i	Length of overlap	750 mm
j	Metal protection treatment of fabricated mast section	Hot-dip galvanised through single dipping process
k	Thickness of galvanizations (min)	85 Microns (bottom) as per IS:2629
l	Size of opening door at base	300 x 1000 mm approx
m	Type of locking arrangement and door construction	Anti Vandal type
n	Details of stack board inside	Insulated Base Board
o	Size, material & thickness of cable termination box	Standard
p	Size of Base Plate diameter (mm)	550 mm
q	Size of Base Plate Thickness	25 mm thick
r	Size of Anchor Plate thickness	4 mm
s	Details of Template	Same as Anchor Plate.

2		
a	Maximum wind pressure (basic wind speed)	180 km/hr as per IS:875 (Part - III)

b	Maximum gust speed time	3 Seconds
c	Height above ground level at which wind speed is considered	10 Mtrs.
d	Factor of safety for wind load	1.25
e	Factor of safety for other loads	1.15
f	Applicable standard for mast design	Technical Report # 7:2000 by ILE, UK
3		
a	Type of foundation	Open Raft shallow footing
b	Size of foundation	As per design conforming to IS: 456
c	Design safety factor	2.0
d	Considered wind speed (km/hr)	180 km/hr
e	Depth of foundation (mm)	As per the requirement of design
f	Average soil bearing capacity	As per site condition
g	Number of foundation bolts	8 Nos.
h	PCD of foundation bolt (mm)	460 mm
i	Type of foundation bolt	<u>Tor Steel/ EN – 8</u>
j	Bolt diameter (mm)	25 mm X 850 mm
4		
a	Diameter of carriage ring (mm)	Suitable for 9 Fittings
b	Construction	Channels 75 x 40 x 4 mm thick
c	Number of joints	3 Segments
d	Buffer arrangement between carriage and masts	Rubber padded guide ring provided
e	Load carrying capacity	350 kg
f	Total weight of assy. with fitting	As per design
5		
a	Make of Winch, number of drums	Double Drum
b	Capacity	SWL 350 kg
c	Operating speed	410 rpm Electric motor (Three Phase)
d	Method of operation	Manual / Power tool
e	Type of lubricant	Gear oil

f	Material of construction of gears	Phosphorus Bronze / EN 19
g	Tested load per drum (kg)	350 kg
h	SWL of Winch at 410 rpm	350 kg SWL
6		
a	Number of ropes / thickness	3 Nos. / 6mm & 2 Nos. / 6mm (Three wire rope)
b	Construction	7 x 19
c	Diameter (mm)	6 mm
d	Thimbles and Terminals	As required
e	Factor safety (specified not less than 5)	7
7		
a	Type	PVC insulated & PVC sheathed.
b	Material	PVC insulated Copper conductor
c	Make	<u>ISI make</u>
d	Current carrying capacity	As per standard
e	Conductor size	5 Core x 2.5 Sq.mm
8		
a	Type	Integral, mounted at the base of the mast
b	Input supply	415V, 3 Phase
c	Wattage	.75 HP/ 1 HP
d	Number of speed	Single speed
e	Reversible / Non-reversible	Reversible
f	Operating speed	410 rpm

Executive Engineer (E)

Schedule of Quantities

Name of work:- Supply, installation, testing & commissioning of high mast and street light poles at Fruit & Vegetable Market, Okhla.

S.NO.	Description of Item	QTY.	Unit	Rate	Amount
1	Supplying, installation, testing and commissioning of raising / lowering type of High Mast Tower of 16 mtr High Mast height with top dia and bottom dia as per specifications attached made out of 4 mm thick, on existing foundation as per specification attached & comprising broadly the following:-				
	Galvanized steel 20 side polygonal mast in section with base plate and hot dipped galvanized section. The sections shall be stress / slip fitted without any circumferential weld in between. There shall be only one longitudinal seam weld per section and no circumferential weld.				
	Head frame sliding galvanized lantern carriage capable of moving up and down the mast complete with self aligning mechanism guides and capable of receiving the 6 Nos. of flood light fittings as per detail enclosed and their control gear boxes (lantern carriage with as many nos. of arms as per detail enclosed).				
	Set of hoisting ropes made up of stainless steel				
	Double drum winch with power unit.				
	Heavy gauge hot dip galvanized lighting finial for lighting protection of High Mast.				
	Multicore, copper conductor flexible power trailing cables of appropriate rating for energizing the luminaries complete as per specification attached.	1	Each		
2	Designing & Casting of suitable open raft type RCC shallow foundation for 16 mtr High Mast as per recommendation of the manufacture adopting the safe soil bearing capacity of site at 10 T/Sq. mtr. at 2 mtr. below FGL including positioning of suitable foundation bolt nut washer, Pdg. Straightening cutting, bending tings strictly as per bar bending schedule & drawing complete and PVC pipe of 110 mm dia for cable entry at desired level i/c supplying and casting as per Manufacturer specifications.	1	Each		
3	Supply of foundation bolts for 16 m high mast foundation manufactured from special steel along with nuts, washers, anchor plates & templates.	1	Set		
4	Supply of 8 mtr. long GI Octagonal Pole having made out of 3 mm thick top dia of 70 mm bottom dia of 130 mm & base plate of 220x220x12 mm along	14	Nos.		

	with single arm bracket 1000 mm long made up of 48 mm dia GI pipe				
5	Construction of shallow foundation with M20 grade concrete for 8 mtr. Pole of size 600x600x1500 mm considering the safe soil bearing capacity at site as 10 T/Sq mtr. with all materials and labour.	14	Nos.		
6	Erection of the pole with the help of suitable tools and tackles, crane etc as required. Wiring of luminaries	14	Nos.		
7	Supply of J type foundation bolt for 8 mtr. GI Octagonal pole manufacture from special steel along with nuts, washers template.	14	Set		
	Gross Amount				

Executive Engineer (E)

Asstt Engineer (E)

I/we have read the conditions of contract carefully and am/are ready to carry out the same job at the rate mentioned against each item of the above mentioned schedule.

(Signature of Contractor with Seal)