

**AGRICULTURAL PRODUCE MARKETING COMMITTEE
MARKET OF NATIONAL IMPORTANCE
NEW OFFICE COMPLEX, NFM- PH-II, SARAI PIPAL THALLA, AZADPUR, DELHI-33**

**Name of work: Dismantling and Reconstruction of shed no. 10 in NFM, Azadpur.
ITEM RATE TENDER AND CONTRACT FOR WORKS**

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This NIT contains 69 pages marked as Sl. No. 1 to 69

**Executive Engineer
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.No.	Tender ID	Name of Work	Estimated Cost/ Earnest money (In Rupees)	Last Date and Time
1	2018_DAMB_	Dismantling and Reconstruction of shed no. 10 in NFM, Azadpur.	<u>3,26,43,238/-</u> 6,53,000/- Time Allowed: 4 Months	To be Uploaded Tender on 06/08/2018 upto 1300Hrs.
2.	2018_DAMB_	Dismantling and Reconstruction of shed no. 12 in NFM, Azadpur.	<u>2,89,95,389/-</u> 5,80,000/- Time Allowed: 4 Months	To be Uploaded Tender on 06/08/2018 upto 1300Hrs.
				Opening of Technical Bid 06/08/2018 on 1500Hrs.
				Opening of financial Bid to be intimated separately on website

Date of release of tender through e-procurement solution: 11/07/2018

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

Executive Engineer
APMC Azadpur

AGRICULTURAL PRODUCE MARKETING COMMITTEE
MARKET OF NATIONAL IMPORTANCE
NEW OFFICE COMPLEX, NFM- PH-II, SARAI PIPAL THALLA, AZADPUR, DELHI-33

1.0 NOTICE INVITING TENDER

- 1.1 Item rate tender is invited through Delhi Govt. e-procurement website <https://govtprocurement.delhi.gov.in> on behalf of the Secretary, APMC, Azadpur, by Executive Engineer, APMC, Azadpur, Delhi-110033 for under mentioned work from approved and eligible contractors of CPWD & those on appropriate list of MES, Railways, P & T, DDA, NDMC, MCD, I&FC Deptt. (Delhi), DJB.

N/ W: - Dismantling and Reconstruction of shed no. 10 in NFM, Azadpur.

The enlistment of the contractor's should be valid on the last date of uploading the tender.

In case on last date of uploading the tender is extended, the enlistment of contractors/ vendors should be valid on original date of submission of tender.

- 1.2 The work is estimated to cost Rs. 3,26,43,238/-The Estimated cost is merely a guide.

1.3 Criteria for eligibility.

Only those agencies shall be eligible for tender who Submit definite proof of following:-

- i. Having successfully completed similar works during the last 7 years ending 31/07/2018.
 - a. Three similar completed work, costing not less than the amount equal to Rs. 130.58 Lacs
Or
 - b. Two similar completed works, costing not less than the amount equal to Rs. 195.86 Lacs
Or
 - c. One similar completed work of aggregate cost not less than the amount equal to Rs. 261.15 Lac

“Similar work means “The work of construction of shed with steel structure / Building work.”Having successfully completed similar works during the last 7 years or contractor may submit the proof of having associate/tie up with a reputed fabricator.

The eligible contractor must have executed at least one similar work (either part of above or a separate one) with some Central/State Govt./Central Autonomous body/ Central Public Sector undertaking or client's organization. In case the work experience is of private sector the completion certificate shall supported with corresponding TDS certificates value of work shall be considered equivalent to the amount of TDS certificate.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to last date of receipt of tender.

- 1.4 Technical & Financial bid shall be uploaded simultaneously. Only documents required for Technical Bid be uploaded under Technical Bid Part and Financial Bid shall only be uploaded under Financial Bid Part.

Technical Bid shall be uploaded through E-tendering with scanned copies of:-

- (i) RTGS/NEFT Challan for Rs.6,53,000/- (Rupees Six Lacs Fifty Three Thousand)
- (ii) Valid Registration Certificate of appropriate category.
- (iii) Work experience certificates*.

- (iv) PAN card.
- (v) Registration certificate under GST.
- (vi) An affidavit duly notarised that upto date GST returns have been filed and agency has no dues towards GST with acknowledgment of latest copy of return filed.
- (vii) Affidavit duly notarised regarding non execution of similar work on back to back basis as elaborated under clause 5 of next page.
- (viii) Affidavit duly notarised regarding Self declaration that firm has not blacklisted or abandoned as per details herein under tender.
- (ix) Scanned copy of canceled cheque of the agency for refund the EMD
- (x) Any other documents specified in the tender document.
- (xi) An Earnest Money Deposit (EMD) of Rs.6,53,000/- (Rupees Six Lacs Fifty Three Thousand) should be remitted by RTGS /NEFT Challan in favour of APMC, Azadpur, Account No.50276843057 of (Allahabad Bank Azadpur). IFSC Code: ALLA0210711, MICR Code 110010004.

Note :- (i) *Agency shall enclose/upload all requisite papers/ under taking (on non judicial stamp paper of Rs. 50/- each). In the event of failure to enclose/ upload above, bid of the participating firm shall not be considered for Technical Evaluation.*

(ii) *No Financial Bid/ Rate be given under Technical Bid. In case if any agency upload financial Bid/ rate with above Technical Bid documents, his bid shall not be considered for Technical Evaluation and his tender shall be treated as invalid.*

(iii) *The tenderer shall be required to produce definite proof from the appropriate authority, in line with the above eligibility criteria and it should be to the satisfaction of competent authority for having satisfactorily completed similar work of magnitude specified above. Work executed with private sector, be supported by TDS certificates.*

(iv) *Only scanned and uploaded documents through E-tendering process shall be considered for eligibility. No other document later on submitted manually shall be considered. The tenderer shall have no claim on this account afterwards.*

1.5 “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 APMC, AZADPUR 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.”

1.6 Scope of work:

The work under this contract shall generally consist of dismantling of all components of existing shed i.e. existing platform foundation etc. complete and disposal of all dismantled material in accordance with the terms and conditions of the agreement as well as item of the contract contained in the Schedule of Quantities including construction of new shed with laying foundation for columns, construction of platform, raising of steel columns, fabrication and erection of tubular trusses and laying of roofing with precoated galvanized iron profile sheet 0.5 mm thick and ventilated with 2 mm thick imposed polycarbonate sheet having trapezoidal profile matching to the roof and cladding. This scope of work shall also include

all electrification internal, external, fire fighting arrangements, rain water harvesting provisions as per approved drawings and item of the schedule of quantities. The work shall be executed as per detailed approved design and drawings / instructions of the engineer-in-charge.

- 1.7 The contractors/ agencies are required to fulfill the provisions of PF Act (under EPF Scheme) and other Labour Laws as applicable time to time.
- 1.8 Agreement shall be drawn with the successful tenderer on prescribed PWD 8 Form which is available with APMC, Azadpur office. Tenderer shall quote his rates as per various terms and conditions of the said form, which will form part of the agreement.
- 1.9 Time of completion of this work shall be 6 months from the date of start as defined in schedule "F" i.e. 10th day from issue of letter of acceptance.
The Contractors are advised to inspect and examine the site and its surroundings and satisfy themselves with the nature of site, the means of access to the site, the constraints of space for stacking material machinery, labour etc. they shall acquaint the conditions of APMC, Azadpur before tendering, no claim whatsoever themselves with shall be entertained thereafter.
- 1.10 It shall be responsibility of contractor to erect barricading to avoid encroachment by daily visiting vendors at the working site, arrangement of light or generator at his own cost & access to transport material to the site from due to heavy traffic congestion and the weather condition due to rain in monsoon season & it's after effects. No claim whatever on account of aforesaid reason shall be entertained including grant of extension of time for delay etc.
- 1.11 The contractor shall deemed to have inspected the site of work and acquainted himself with the site conditions and surroundings including access to the site for transportation of his men and material to the site of work. The department in no way shall be responsible or entertain any claim whatsoever on account of having not inspected site. The general conditions, specific conditions, particular conditions given in the contract are exhaustive but should not be construed to be conclusive any short fall / omission which is necessary for successful completion of the work as per specification shall deemed to have been included in the contract and no claim whatsoever shall be entertained by the department.
It is presumed that the Contractor shall satisfy himself for all possible contingencies, incidental charges, wastages, bottlenecks etc. likely during execution of work and acts of coordination, which may be required between different agencies. Nothing extra shall be payable on this account and also no extension of the contract on this account.
- 1.12 The site for the work is available.
- 1.13 Tender documents consisting of plans, specifications, the schedule of quantities of the various classes of work to be done and the set of terms and conditions of contract to be complied with by the contractor from whose tender may be accepted and other necessary documents can be seen in the office of the Executive Engineer APMC, Azadpur, Market Of National Importance Delhi-110033 between 11.00 hours & 15.00 hours of upto 06/08/2018 except on Sundays and Public Holidays. Tender documents is *available on web site* <https://govtprocurement.delhi.gov.in>
- 1.14 The documents uploaded by the bidders shall be got verified from originals from 12:00 PM to 5.00 PM on 08/08/2018 in the office of Engineer-in-charge.

- 1.15 Submission of tender through e-procurement will be stopped on 06/08/2018 at 13.00 hours and only technical bid will be opened on the same day at 15.00 hours *and result of technically qualified tendered will be displayed on web site <https://govtprocurement.delhi.gov.in> which can be seen by all the tenderers who participated in the process. Information of which shall also be sent to the bidders through e-mail.*

The financial bids of only eligible tenderers who have deposited EMD through RTGS/NEFT Challan for Rs.6,53,000/- (Rupees Six Lacs Fifty Three Thousand only) other documents to the satisfaction of competent authority of APMC, Azadpur and who got verified the documents with originals and have technically qualified, shall only be opened on 06/08/2018 at 15.00 hours and financial bid shall be opened date to be intimated separately on website.

- 1.16 The Contractor, whose tender is accepted, will be required to furnish performance guarantee @ 5% of tendered amount for his proper performance of contract for the period of completion + three months i.e. for a total period of 9 month.

The performance guarantee shall be in the form call deposit receipt /Demand Draft/ Fixed deposit receipt of any Scheduled Bank or the State Bank of India in accordance with the prescribed form.

These performance guarantee shall required to submit within the period specified under schedule “F”.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.

1.17 Recovery Item:-

In schedule of quantity under item no. 47 of this NIT having item of credit for dismantled material of existing shed and removal, the reserve amount of Rs. 9,53,895/- is to credited to the APMC. If the tenderer quotes the amount less than 9,53,895/- of reserve value recovery against this item shall be made by the department of the balance amount less than Rs 9,53,895/-, however if the tenderer quotes rates above than Rs 9,53,895/- the recovery shall be made on his quoted rates. For the purpose of determination of position of tenderer, his quoted amount for this item no. 47 shall be considered

- 1.18 All the approved design and drawings for this work are available in the Office of Executive Engineer and the contractor can inspect the drawings in the Office of Executive Engineer, APMC, Azadpur on any working day between 11.00 A.M. to 4.00 P.M. except Sunday & public holidays. The approved design and drawings have been prepared with the existing requirement of the department but any change in the design and drawing subsequently required as per site condition can be incorporated in the design and drawings. The contractor shall be duty bound to execute the work as per the revised / modified design and drawing and anything extra whatsoever shall be payable for execution of work as per modified drawings. The tenderer shall be responsible for arranging and maintaining at his materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has gone through and all other contract documents and has made himself ware of the scope of work and specifications/ condition of the work to be done. The rate quoted by contractor should be inclusive all operation required

for successful execution of work and all taxes/ octroi etc. deemed to be included in the rates quoted by him.

- 1.19 (a) 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.
(b) The competent authority on behalf of Secretary, APMC, Azadpur 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.
- 1.20 In case of any difference / ambiguity between English & Hindi versions, English version shall prevail.
- 1.21 The 5% security deposit as defined under GCC-2014 shall be deducted from total value of work done and shall be refunded as per GCC 2014.
The contractor shall not be permitted to tender for works in the APMC, Azadpur (responsible for award and execution of contracts) whose near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Secretary, APMC, Azadpur 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 Agricultural Produce Marketing Committee, Azadpur. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this department. The contractor shall give a list of both Gazetted and non-gazetted APMC, AZADPUR employees related to him.
- 1.22 No Engineer of gazetted rank or other gazetted officer employed in Engineering or Administrative duties in an Engineering Department of the APMC, AZADPUR is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Secretary, APMC, Azadpur in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of the Secretary, APMC, Azadpur as aforesaid before uploading of the tender or engagement in the contractor's service.
- 1.23 The tender for the work shall remain open for acceptance for a period of ninety (90) days from the date of opening of tender's price bid. If any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further, the tenderer shall not be allowed to participate in the re-tendering process of the work.
- 1.24 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: -

The Notice Inviting Tender, PWD Form, all the tender documents including all conditions and specifications with up to date correction slips upto date of opening tender and drawings, if any, forming the part tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading to award of work.

- 1.25 The contractor shall quote his rates keeping in mind the specifications; terms & conditions, particular specifications and special conditions etc. and nothing shall be payable extra whatsoever unless otherwise specified. If the tenderer does not quote the rate for any item, leaving the space blank, whatsoever, it will be presumed that the tenderer has loaded the cost of this/ these item(s) on other item(s), and he will execute this /these items at zero cost, and the tender will be evaluated accordingly.
- 1.26 The department shall deduct Income Tax on the value of work done from each bill of the contractor as per prevailing Government orders. In lieu, the department shall issue a certificate of deduction of the tax at source to the contractor, in relevant form.
- 1.27 On item wise rates quoted by the contractor are inclusive of GST & other applicable taxes if any & nothing extra on this account shall be payable to be contractor.
- 1.28 The department shall deduct Labour CESS @1% on the value of work done from each bill of the contractor as per prevailing Government instructions/orders.
- 1.29 In the tender document, the word “CPWD” shall be read as “APMC, Azadpur” and the word “President” may be read as “Secretary, APMC, Azadpur” wherever exists.
- 1.30 The tenderer shall ensure to submit his offer only through E- tendering process.
- 1.31 The tender(s) if required may submit queries if any through E-mail and in writing to the tender inviting authority to seek clarification within 7 days from the date of uploading of tender. APMC will not reply to the queries which are not considered fit for reply. Queries received after 7 days of uploading of tenders shall not be considered. E-mail ID is apmcazadpur@gmail.com

Executive Engineer

For & on behalf of Secretary, APMC, Azadpur

AGRICULTURAL PRODUCE MARKETING COMMITTEE
MARKET OF NATIONAL IMPORTANCE
NEW OFFICE COMPLEX, NFM- PH-II, SARAI PIPAL THALLA, AZADPUR, DELHI-33

2.0 Item Rate Tender & Contract for Works

Tender for the work of: - Dismantling and Reconstruction of shed no. 10 in NFM, Azadpur

- (i) To be uploaded on website by 13:00 hours of 06/08/2018 .
- (ii) To be opened online in the office of Secretary, APMC through Executive Engineer Azadpur, Delhi-33.
- (a) Technical Bid at 15:00 Hours on 06/08/2018.
- (b) Financial Bid at 14:30 hours on *-----*.the Date shall be intimated through e-mail and telephonically

TENDERER

I/We have read and examined the notice inviting tender, schedule, A, B, C, D, E & F. Specifications applicable, 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 conditions 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 Secretary, APMC, Azadpur within the time specified in Schedule 'A'-'F', viz., schedule of quantities and in accordance in all respects with the specifications, designs, 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 modifications in its terms and conditions.

An Earnest Money Deposit (EMD) of Rs.6,53,000/- (Rupees Six Lacs Fifty Three Thousand Only) should be remitted by RTGS /NEFT Challan in favour of APMC, Azadpur, Account No.50276843057 of (Allahabad Bank Azadpur). IFSC Code: ALLA0210711, MICR Code 110010004. If I/we fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said Secretary, APMC, Azadpur 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 work as specified, I/we agree that Secretary, APMC, Azadpur 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 work referred to in the tender documents upon the terms and conditions contained or referred to therein and to vary 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 & Performance Guarantee as aforesaid, I/We shall be debarred for participation in the retendering process of the work.

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 authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated **.....

Witness:

Address:**

Occupation:**

* *

**

Signature of Contractor

Postal Address

3.0 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 Secretary, APMC, Azadpur for a sum of

Rs.* _____ (Rupees* _____
_____)

The letters referred to below shall form part of this contract Agreement:-

a)*

For & on behalf of the Secretary, APMC

b)*

Signature * _____

c)*

Dated*

Designation: Executive Engineer, **APMC, Azadpur**

* To be filled by EE

** To be filled by Contractor

4.0 SCHEDULE A – F (PWD)

SCHEDULE ‘A’

Schedule of quantities (Enclosed.) As per schedule attached.

SCHEDULE ‘B’

Schedule of materials to be issued to the contractor.

S.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.

S.No.	Description	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,

1. General Conditions.
2. Special conditions for civil works.
3. Special conditions for cement and steel.
4. Particular Specifications for Civil works
5. Guarantee Bonds

SCHEDULE ‘E&F’

Reference to General Conditions of contract.

Name of work:- Dismantling and Reconstruction of shed no. 10 in NFM, Azadpur.

Estimated cost of work. Rs. 3,26,43,238/-

(i) Earnest Money Rs.6,53,000/-

(ii) Performance Guarantee = 5% (five percent) of the tendered value.

(iii) Security Deposit A sum @ 5% of the gross amount of the bill shall be deducted from each running account bill of the contractor till the sum along with sum already deposited as earnest money will amount to security deposit of 5% of the tendered value of the works.

SCHEDULE 'G'

GENERAL RULES & DIRECTIONS:

Officer inviting tender

Secretary, APMC, Azadpur through
Executive Engineer, APMC, Azadpur

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

See below

Definitions:

2 (v) Engineer –in – charge

Executive Engineer,
APMC, Azadpur

2 (viii) Accepting Authority

Vice-Chairman, DAMB

2 (x) Percentage on cost of materials
and labour to cover all
overheads and profits.

15%

2 (xi) Standard Schedule of Rates.

DSR 2014 with correction slips issued upto
the last date of issue of tender

2 (xii) Department

Agricultural Produce Marketing Committee
Azadpur

9 (ii) Standard PWD Form

PWD form 8, as modified & correction slip
upto date correction slips upto date of opening
tender.

Clause 1

- i) Time allowed for submission of performance guarantee from the date of issue of letter of acceptance, 10 working days
- ii) Maximum available extension beyond the period as provided in (i) above, 5 days

Clause 2

Authority for fixing

Compensation under Clause 2.

Vice-Chairman, DAMB

Clause 2A

Applicable

[

Clause 5

Time allowed for execution of work
To be reckoned from 10th day of issue
of letter of acceptance

: 6 months

Mile stone (s) to complete the work

As per table given below

Table of Mile Stone(s)

S.No.	Description of Milestone (Financial)	Time allowed in days (from date of start)	Amount to be with-held in case of non achievement of Milestone
1.	1/8 TH (of whole work)	1/4 TH (of whole work)	In the event of not achieving the necessary progress as assessed from the running payments, 1% of the tendered value of work will be withheld for failure of each mile stone.
2.	3/8 TH (of whole work)	1/2 (of whole work)	
3.	3/4 TH (of whole work)	3/4 TH (of whole work)	
4.	Full	Full	

Authority to give fair and reasonable extension of time for completion of work. Keeping in view the penalty clause

Vice Chairman, DAMB

Clause 6A

applicable.

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. --

50 lakhs

Clause 10 A

List of testing equipment to be provided by the contractor at site lab.

..... As per site requirement

Clause 10 B (ii)

Whether Clause 10 B (ii) shall be applicable

No

Clause 10 CA and 10C

Not Applicable

Clause 10CC

Not Applicable

Clause 11

Specifications to be followed for execution of work.CPWD specification -2009 Vol-I & II with upto date correction slip

Clause 12

12.2 & 12.3) Deviation limit beyond which clause 12.2 & 12.3 shall apply for building work/ shad $\pm 30\%$. (Plus/Minus) except foundation work

12.5) Deviation limit beyond which clause 12.2 & 12.3 shall apply for foundation work +100%

Clause 16

Competent Authority for V.C., DAMB

Deciding reduced rates

Clause 18

List of mandatory machinery, Tools & plants to be deployed by the contractor at site:-

..... As per site requirement

Clause 36(i)

Requirement of Technical representative (s) required at site

S.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i)	
						Figures (Per Person)	Words (Per Person)
1.	Project Manager with degree in Civil Engineering		Principal Technical Representative	15 Years	1 No.	50,000/- pm.	Fifty Thousand
2.	Quality Control Manager (Graduate Engineer)		Quality Control Engineer	5 Years	1 No.	30,000/- pm.	Thirty Thousand
3.	Computer Operator for Engineer-in-charge office		Computer / Data Entry Operator	2 Years	1 No.	20,000/- p.m.	Twenty Thousand

Assistant Engineer retired from Govt. service holding Diploma will be treated at PAR with Graduate Engineers. Even, if contractor or partner himself is an Engineer / Overseer, it is necessary on part of contractor to employ Engineer as per stipulation.

Clause 42

- i)
- (a) Schedule/ statement for determining theoretical quantity of cement & bitumen on the basis of Delhi DSR-2014 and as per nomenclature of item with all correction slip upto the date of receipt of tender.
- ii) Variations permissible on theoretical quantities.
- a) Cement for works with estimated
- Cost put to tender not less than Rs. 5 Lakhs. : 3% plus/minus
- For works with estimated cost put to : 2% plus /minus
- Tender more than Rs. 5 lakhs.
- b) Bitumen All works. : Not applicable
- c) Steel Reinforcement and structural steel sections for each diameter, section and category : 2% plus / minus
- d) All other materials : Nil

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

SI. No.	Description of Item	Rates in figures and words at which recovery shall be made from the Contractor. Rates in schedule 'B' plus 10% in case materials issued by the Department.	
		Excess beyond permissible variation.	Less use beyond the permissible variation.
1.	Cement	Recovery rates will be considered as applicable` during the month of opening of tender as fixed by CPWD	
2.	Structural steel sections		
3.	Steel Reinforcement TMT bar		

Executive Engineer
APMC, Azadpur

5.0 GENERAL AND SALIENT POINTS

Name of Work :-Dismantling and Reconstruction of shed no. 10 in NFM, Azadpur.

- 5.1 The security deposit shall be recovered from the running bills of the contractor at the rates specified in modified schedule E & F and earnest money deposited in the form of Securities or fixed deposit receipt shall only be treated a part of the security deposit. The part earnest money in the form of the Guarantee bonds, if deposited at the time of tender, shall not be considered towards this part of security deposit.
- 5.2 The contractor(s) shall submit a detailed program of execution of work showing activities distinctly along with Bar-Chart and CPM Chart on MS project within ten days of the letter of acceptance of work in direct relation to the time stated in the contract document for completions of items of the works.
- 5.3. The contractor shall make his own arrangements for electricity and water required for the execution of the work and nothing extra shall be paid for the same. However, for electrical connection, Engineer-In-Charge shall recommend the application to concerned authority for Electrical connection if required. Necessary payment shall be made by the contractor directly to the department concerned. In case the concerned authority fails to sanction the electric connection or delays the sanction of electric connection, the contractor shall make his own arrangements at his own cost.
- 5.4. For water supply, contractor shall make his own arrangement including boring \ of tube well after taking approval from competent authority if necessary, and nothing extra shall be paid by the Department for arrangement of water or on its treatment to make it fit for construction as per requirements laid down in is: 456:2000, Para 5.4 or CPWD Specification 2009 Vol. -I & II with correction slips issued upto the last date of Submission of tender, assistance required like request letter etc. to the required authority shall be given by Deptt.
The water to be used for construction shall have to satisfy the requirements as per Indian Standard codes. As soon as the contractor decides or locates source of water he shall be required to send samples of water for testing to Lab as directed by Engineer-in-charge.
In case the water is found un-suitable for construction purpose, the contractor shall at his own cost take advice/remedial measures to make water fit for construction from Lab.
The record of such remedial measures chemical procured / doze so added shall required to be maintained by contractor and shall submit along with R/A bills. The samples of water testing have to be repeated quarterly. Nothing on A/c of water for testing, remedial, rectification & periodical testing etc. shall be payable.
- 5.5 All the materials including cement and steel will be arranged by the contractor himself and nothing extra shall be paid for cartage of material at site of work.
- 5.6 The contractor shall use the concrete pump / transit mixer or any other mechanical means for transporting & placing the concrete to keep the progress of work as per program. Nothing extra shall be paid on this account.
- 5.7 For lifting of concrete to various levels, concrete pump/tower cranes/Mechanical hoist of appropriate size / capacity can be deployed by the contractor, nothing extra shall be paid on this account.

- 5.8 The contractor shall quote the rates separately in figures and words accurately so that there is no discrepancy in figures and words and total amount. In case of discrepancy, procedure specified in the contract document of APMC, Azadpur shall be followed.
- 5.9 Final date of completion shall be recorded by the Engineer-in-charge . The authority for levying compensation under clause-2 and granting fair & reasonable extension of time for completion under clause 5 shall be Secretary, APMC, Azadpur, Delhi or his successor.
- 5.10 If the contract is determined for any reasons whatsoever by the Engineer-in-Charge , the entire contract shall be treated determined automatically. The Engineer-in-Charge for determination of contract under clause-3 shall be Executive Engineer, for work.
- 5.11 The authority for appointment of arbitrator under clause-25 shall be Vice Chairman, DAMB.
- 5.12 QUALITY ASSURANCE:-**
- 5.12.1 The contractor shall ensure quality control measures on different aspects of construction including materials, workmanship and correct construction methodologies to be adopted. He shall have to submit quality assurance program within fifteen days of the letter of acceptance of the work. The quality assurance program should include method statement for various items of work to be executed along with check lists to enforce quality control.
- 5.12.2 The contractor shall intimate the source of various raw materials namely aggregate, sand, water etc. to be used on the work to get, approved from the Engineer-In-Charge. Trial mixes for controlled concrete shall be done using the approved materials. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the Engineer-In-Charge for which tests etc. shall be done by the contractor at his own cost.
- 5.12.3 The contractor shall submit brand / make of various materials to be used for the approval of the Engineer-In-Charge out of the preferred list appended in the tender document within 10 days of the letter of acceptance and once approved, he shall stick to it.
- 5.12.4 The contractor shall submit shop drawings of staging and shuttering arrangement to Engineer-In-Charge. The contractor shall be fully responsible for the safety of shuttering & form work any mishappening with failure of shuttering & staging shall be the sole responsibility of the contractor.
- 5.13 Un-authorized sub-letting of work shall not be permitted.
- 5.14 All material shall only be brought at site as per program finalized with the Engineer-In-Charge. Any pre-delivery of the material, not required for immediate consumption shall not be accepted and thus not paid for.
- 5.15 Testing Lab - The contractor has to establish site-testing lab as per provision in the Tender Document (additional condition general).
- 5.16 Measurement /Payment - The contractor has to measure the work & submit the same to Department as per provision of modified clause 6 & 7 of tender. The measurement shall be submitted by the contractor to the Engineer-in-charge or his authorized representative for each bill except for the hidden measurements which shall be submitted for check / test check as & when work is being carried out. Payment shall be made accordingly.

5.17 PERFORMANCE GUARANTEE

- 5.17.1 The contractor shall submit an irrevocable PERFORMANCE GUARANTEE of 5% (Five percent of the tendered amount) in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (notwithstanding and/ or without prejudice to any other provisions in the contract) within 7 working days of issue of letter of acceptance. This period can be further extended by the Engineer-in-Charge upto a maximum period of 5 days on written request of the contractor stating the reason for delays in procuring the Bank Guarantee to the satisfaction of the Engineer-in- Charge.

This guarantee shall be in the form of Fixed deposits or Guarantee Bonds of any scheduled Bank or the State Bank of India in accordance with the form annexed hereto. In case a fixed deposit receipt of any Scheduled Bank is furnished by the contractor the Govt. as part of the performance guarantee and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forth with on demand furnish additional security to the Govt. to make good the deficit.

- 5.17.2 A letter of acceptance shall be issued informing the successful tenderer of the decision of the competent authority to accept his tender and to submit the performance Guarantee within 7 working days in any of the prescribed form. and site of work shall be handed over thereafter. In case of failure by the contractor to furnish the performance guarantee within the specified period, APMC, Azadpur shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money absolutely.
- 5.17.3 The performance Guarantee shall be initially valid upto the stipulated date of completion plus 90 Days beyond that. In case the time from completion of work gets extended, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest.
- 5.17.4 The Engineer-in-charge shall not make a claim under the performance guarantee except for amounts to which APMC, Azadpur is entitled under the contract (not withstanding and/ or without prejudice to any other provisions in the contract agreement) in the event of:-
- (a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer-in-Charge may claim the full amount of the Performance Guarantee.
 - (b) Failure by the contractor to pay APMC, Azadpur any amount due, either as agreed by the contractor or determined under any of the clauses/ conditions of the agreement, within 30 days of the service of notice to this effect by Engineer-in-Charge.
 - (c) In the event of the contract being determined or rescinded under provision of any of the clause/ condition of the agreement shall stand forfeited in full and shall be absolutely at the disposal of the Secretary, APMC, Azadpur.

- 5.18 Contractor shall prepare working schedule giving the date and time of each items of start and completion of work and submit the same to Engineer-in-Charge for his approval.
- 5.19 The agency shall take all precautions for the safety of workman's during fabrication of column and trusses as this fabrication may be carried out during the monsoon season. As such the agency shall carry out the fabrication either in covered shed or under temporarily covered protection so as to avoid any accident due to electric welding works.
- 5.20 The agency shall erect the column / trusses taking all precautions of safety of labours working at site or in adjoining area including the traders etc. For this he shall provide a complete scaffolding to the satisfaction to Engineer-in-charge during erection of columns/ trusses at site.
- 5.21 The contractor shall follow all safety norms during staking of building material / steel structure so as to avoid any damage / injury to the property of APMC as well as labours / visitors.

6.0 GENERAL CONDITIONS

- 6.1 Unless otherwise specified, CPWD Specification 2009 Vol. -I & II with correction slips issued upto the last date of Submission of tender shall be followed in general. Any additional item of work, if taken up subsequently, shall also conform to the relevant CPWD specifications mentioned above. Should there be any difference or discrepancy between the description of items as given in the schedule of quantities, particular specifications for individual items of work (including special conditions) and I.S. Codes etc., the following order of preference shall be observed:
- i. Description of items as given in Schedule of quantities.
 - ii. CPWD Specifications 2009 (Volume I and II) with upto date correction slips issue till date of tenders, DSR 2014.
 - iii. All Condition of the contract and particular specifications and approved drawings.
 - iv. BIS/I.S. Codes of particulars
 - v. Decision /direction of Engineer-in-Charge.
- 6.2 INSPECTION OF SITE
- 6.2.1 The Contractors is deemed to have inspected and examined the site and its surroundings and satisfy themselves with the nature of site, the means of access to the site, the constraints of space for stacking material machinery, labour etc. constraints put by local regulations, if any, weather conditions at site, general ground /subsoil conditions etc. or any other circumstances which may affect or influence their tenders.
- 6.2.2 The contractor shall make all arrangement like barricading, scaffolding/form work etc. to provide safely measures as per the norms of industrial safety act prevalent at time of execution.
- 6.2.3 The contractor shall engage site Engineer as per provision of clause 36 of the agreement who and his authorized representative should always be available at the site of work for taking instructions from the Departmental Officers and ensure proper executive of work. No work should be done in the absence of such authorized representative . The site Graduate Engineer of the contractor shall also remain available at site during the execution of all the major items and also when the site is likely to be inspected by the Engineer-incharge or senior officers. In case the proper technical staff is not engaged at site by the contractor, the recoveries as per relevant clauses shall be made from the bills of the contractor.
- 6.3 The Contractor shall, if required by him, before submission of the tender, inspect the drawings in the Office of the Engineer-in-Charge. The Department shall not bear any responsibility for the lack of knowledge and also the consequences, thereof to the Contractor. The information and data shown in the drawings and mentioned in the tender documents have been furnished, in good faith, for general information and guidance only. The Engineer-in- Charge, in no case, shall be held responsible for the accuracy thereof and or interpretations or conclusions drawn there from by the Contractor and all consequences shall be borne by the Contractor. No claim, whatsoever, shall be entertained from the Contractor, if the data or information furnished in tender document is different or in-correct otherwise or actual working drawings are at variance with the drawings available for inspection or attached to the tender documents. It is presumed that the Contractor shall satisfy himself for all possible contingencies, incidental charges, wastages, bottlenecks etc. likely during execution of work and acts of coordination, which may be required between different agencies.. Nothing extra shall be payable on this account.

- 6.4 During execution if water encountered from rain, floods, or any other source whatever, may be, the contractor shall carry out dewatering (at his own cost), as and when required. Nothing extra shall be payable on this account.
- 6.5 The nomenclature of the item given in the schedule of quantities gives in general the work content but is not exhaustive i.e. does not mention all the incidental works required to be carried out for complete execution of the item of work. The work shall be carried out, all in accordance with true intent and meaning of the specifications and the drawings taken together, regardless of whether the same may or may not be particularly shown on the drawings and /or described in the specifications, provided that the same can be reasonably inferred there from. There may be several incidental works, which are not mentioned in the nomenclature of each item but will be necessary to complete the item in all respect. All these incidental works /costs which are not mentioned in item nomenclature but are necessary to complete the item shall be deemed to have been included in the rates quoted by the contractor for various items in the schedule of quantities. No adjustment of rates shall be made for any variation in quantum of incidental works due to variation /change in actual working drawings. Also, no adjustment of rates shall be made due to any change in incidental works or any other deviation in such element of work (which is incidental to the items of work and are necessary to complete such items in all respects) on account of the directions of Engineer-in-Charge. Nothing extra shall be payable on this account.
- 6.6 If there are varying or conflicting or contradictory provision made in General Condition of contract PWD - 8 and Conditions mentioned in Tender Document decision of Secretary, APMC, Azadpur shall be final & binding & such decision shall be outside the preview of arbitration
- 6.7 The Contractor shall make arrangements for site office, stores etc. for site staff as directed by Engineer-in-charge and shall also provide all required facilities.
- 6.8 All ancillary and incidental facilities required for execution of work like labour camp, stores, fabrication yard, offices for Contractor, watch and ward, temporary ramp required to be made for working at the basement level, temporary structure for plants and machineries, water storage tanks, installation and consumption charges of temporary electricity, telephone, water etc. required for execution of the work, liaison and pursuing for obtaining various No Objection Certificates, completion certificates from local bodies etc., protection works, barricading, testing facilities laboratory at site of work, facilities for all field tests and for taking samples etc. during execution or any other activity which is necessary (for execution of work and as directed by Engineer-in-Charge), shall be deemed to be included in rates quoted by the Contractor, for various items in the schedule of quantities. Nothing extra shall be payable on these accounts. Before start of the work, the Contractor shall submit to the Engineer-in-Charge, a site /construction yard layout, specifying areas for construction, site office, positioning of machinery, material yard, cement and other storage, steel fabrication yard, site laboratory, water tank, etc .
- 6.9 The Contractor shall keep himself fully informed of all acts and laws of the Central & State Governments, all orders, decrees of statutory bodies, tribunals having any jurisdiction or authority, which in any manner may affect those engaged or employed and anything related to carrying out the work. All the rules & regulations and bye-laws laid down by MCD / NDMC and any other statutory bodies shall be adhered to, by the contractor, during the execution of work. The Contractor shall also adhere to all traffic restrictions notified by the local authorities. All statutory taxes, levies, charges (including water and sewerage charges, charges for temporary service connections and I or any other charges) payable to such authorities for carrying out the work, shall be borne by the Contractor. The Contractor shall arrange to give all notices as required by any statutory /regulatory authority and shall pay to such authority all the fees that is required to be paid for the execution of work. He shall protect and indemnify the Department and its officials & employees against any claim and /or liability arising out of violations of any such laws, ordinances, orders, decrees, by himself or by his employees or his authorized representatives. Nothing extra shall be payable on these accounts. The

fee payable to statutory authorities for obtaining the various permanent service connections and Occupancy Certificate for the building shall be borne by the Department.

6.10 Royalty at the prevalent rates shall be paid by the Contractor as per the terms of supply between them on all materials such as boulders, metals, sand and bajri etc. collected by him for the execution of the work, directly to the revenue authority of the state Govt. concerned. Nothing extra shall be payable on this account.

6.11 The Contractor shall assume all liability, financial or otherwise in connection with this contract and shall protect and indemnify the Department from any and all damages and claims that may arise on any account. The Contractor shall indemnify the Department against all claims in respect of patent rights, royalties, design, trademarks of name or other protected rights, damages to adjacent buildings, roads or members of public, in course of execution of work or any other reasons whatsoever, and shall himself defend all actions arising from such claims and shall indemnify the Department in all respect from such actions, costs and expenses. Nothing extra shall be payable on this account.

6.12. INSURANCE POLICIES

Before commencing the execution of work, the Contractor shall, without in any way limiting his obligations and liabilities, insure at his own cost and expense against any damage or loss or injury, which may be caused to any person or property, at site of work. The Contractor shall obtain and submit to the Engineer-in-Charge proper Contractor All Risk Insurance Policy for an amount 1.25 times the contract amount for this work, with Engineer-in-Charge as the first beneficiary. The insurance shall be obtained in joint names of Engineer-in-Charge and the Contractor (who shall be second beneficiary). Also, he shall indemnify the Department from any liability during the execution of the work. Further, he shall obtain and submit to the Engineer-in-Charge, a third party insurance policy for maximum Rs.10 lacs for each accident, with the Engineer-in-Charge as the first beneficiary. The insurance shall be obtained in joint names of Engineer-in-Charge and the Contractor (who shall be second beneficiary). The Contractor shall, from time to time, provide documentary evidence as regards payment of premium for all the Insurance Policies for keeping them valid till the completion of the work. The Contractor shall ensure that similar Insurance Policies are also taken by his Sub-Contractors / specialized agencies. The Contractor shall however be responsible, to the Department, for any claim or loss resulting from the failure of his Sub Contractors / specialized agencies in obtaining such Insurance Policies. Without prejudice to any of its obligations and responsibilities specified above, the Contractor shall within 10 days from the date of letter of acceptance of the tender and thereafter at the end of each quarter submit a report to the Department giving details of the Insurance Policies along with Certificate of these insurance policies being valid, along with documentary evidences as required by the Engineer-in-Charge. No work shall be commenced by the Contractor unless he obtains the Insurance Policies as mentioned above. Also, no payment shall be made to the Contractor on expiry of insurance policies unless renewed by the Contractor. Nothing extra shall be payable on this account. No claim of hindrance (or any other claim) shall be entertained from the contractor on these accounts.

6.13 TEMPORARY BARRICADING

Proper temporary barricading by fencing with G.I. sheets, shall be carried out by the Contractor at the start of work to for restricted entry to only those involved in the work and also to prevent any accidents, at the same time without causing any inconvenience to the traffic and the users of the buildings in the adjacent plots. It shall be done by providing, erecting, maintaining temporary protective barricading, 2.5 meters in height, made in panels, with each panel having MS frames / MS scaffolding pipes of suitable size and stiffness, with 24 gauge thick GI corrugated sheet or suitably stiffened plain GI sheet fixed on frames. Such panels shall be suitably connected to each other for stability with nuts and bolts, hooks, clamps etc. and fixed firmly to the ground at about 2 meters spacing, for the entire duration till completion of the work. He shall also provide and erect temporary

protective barricades within the plot, if required, to prevent any accident. Temporary protective roofing near the Entrance to the building, under construction, shall be made to protect the visiting officials from getting hurt by falling debris etc. Also, one or more coat of enamel paint of shade as approved and directed by the Engineer-in-Charge shall be applied on the panels in suitable sizes, shapes and numbers as directed by the Engineer-in-Charge. It shall be dismantled and taken away by the Contractor after the completion of work at his own cost with the approval of the Engineer-in-Charge. Nothing extra shall be payable on this account.

6.14 WARNING/CAUTION BOARDS

All temporary warning / caution boards / glow sign ages display such as "Construction Work in Progress", "Keep Away", "No Parking", Diversions & protective Barricades etc. shall be provided and displayed during day time by the Contractor, wherever required and as directed by the Engineer-in-Charge. These glow sign ages and red lights shall be suitably illuminated during night also. The Contractor shall be solely responsible for damage and accident caused, if any, due to negligence on his part. Also he shall ensure that no hindrance, as far as possible, is caused to general traffic during execution of the work. These sign ages shall be dismantled & taken away by the Contractor after the completion of work, only after approval of the Engineer - in - Charge. Nothing extra shall be payable on this account.

6.15 SIGN BOARDS

The Contractor shall provide and erect a display board of size and shape as required and paint over it, in a legible and workman like manner, the details about the salient features of the project, as required by the Engineer-in- Charge. The Contractor shall fabricate and put up a sign board in an approved location and to an approved design indicating name of the project, client / owner, architects, structural consultants, Department etc. besides providing space for names of other Contractors, Sub-Contractors and specialized agencies. Nothing extra shall be payable on this account.

6.16 INTEGRATED PROGRAM CHART

- 6.16.1 The Contractor shall prepare and submit to the Engineer-in-charge, an integrated program chart. The integrated program chart submitted by the contractor shall not have any discrepancy with the financial milestones attached in the contract agreement. The contractor shall execute the work according to the program submitted to and approved by the Engineer-in-Charge.
- 6.16.2 The Contractor shall prepare the integrated program chart showing clearly all activities from the start of work to the completion, with details of requirements of materials, man power, equipments and machinery deployment required for the completion of the work within the stipulated period and submit the same to the Engineer-in-Charge within fifteen days after the issue of letter for commencement of work. The Contractor shall also submit monthly program and progress reports and update / re-schedule the same every month. These shall be submitted by the contractor through electronic media besides forwarding hard copy of the same.
- 6.16.3 The approval by the Engineer-in-Charge of such program or the furnishing of such particulars shall not absolve or relieve the Contractor of any of his duties or responsibilities under the contract to complete the whole work within the prescribed / stipulated time limit. This is without prejudice to the right of the Engineer-in-Charge to take action against Contractor as per terms and conditions of the contract agreement.

6.17 PROTECTIVE SAFETY MEASURES

Necessary protective and safety equipments shall be provided to the Site Engineer, workers & Supervisory staff by the Contractor at his own cost and used at site.

- 6.18 The Contractor shall do proper sequencing of the various activities by suitably staggering the activities within various pockets in the plot so as to achieve early completion. The agency may deploy adequate equipments, machinery and labour as required for the completion of the entire work within the stipulated period specified. Also ancillary facilities shall be provided commensurate with requirement to complete the entire work within the stipulated period. Nothing extra shall be payable

on this account. Adequate number/sets of equipments in working condition, along with adequate standby arrangements, shall be deployed during entire construction period. It shall be ensured by the Contractor that all the equipments, Tools & Plants, machineries etc provided by him are maintained in proper working conditions at all times during the progress of the work and till the completion of the work. Further, all the constructional tools, plants, equipments and machineries provided by the Contractor, on site of work or his work shop for this work, shall be exclusively intended for use in the construction of this work and they shall not be shifted / removed from site without the permission of the Engineer -in-Charge.

6.19 DISPLAY PERMISSIONS

The Contractor shall display all permissions, licenses, registration certificates, bar charts, other statements etc under various labour laws and other regulations applicable to the works, at his site office.

6.20 REMOVAL OF 'MALBA' ETC. FROM SITE

The Contractor shall not stack building material/ malba / muck on the land or road of the local development authority or on the land owned by the others, as the case may be. So the muck, rubbish etc. shall be removed periodically as directed by the Engineer-in-Charge, from the site of work to the approved dumping grounds as per the local byelaws and regulations of the concerned authorities and all necessary permissions in this regard from the local bodies shall be obtained by the Contractor. Nothing extra shall be payable on this account. In case, the Contractor is found stacking the building material / malba as stated above, the Contractor shall be liable to pay the stacking charges / penalty as may be levied by the local body or any other authority and also to face penal action as per the rules, regulations and bye-laws of such body or authority. The Engineer -in-Charge shall be at liberty to recover, such sums due but not paid to the concerned authorities on the above counts, from any sums due to the Contractor including amount of the Security Deposit and performance guarantee in respect of this contract agreement.

6.21 TOOLS AND PLANTS

No tools and plants including any special T&P etc. shall be supplied by the Department and the Contractor shall have to make his own arrangements at his own cost. No claim of hindrance (or any other claim) shall be entertained on this account.

6.22 COORDINATION WITH OTHER AGENCIES

The Contractor shall conduct his work so as not to interfere with or hinder the progress of the work being performed by other Contractors or by the Engineer-in-Charge. As far as possible, he shall arrange his work and place, so as not to interfere with the operations of other Contractors or shall arrange his work with that of the others, in an acceptable and coordinated manner and shall perform it in proper sequence.

6.23 FACILITIES BY THE CONTRACTOR TO THE OTHER CONTRACTORS/AGENCIES

The Contractor shall cooperate with and provide the facilities to the other Contractors and other agencies working at site for -smooth execution of the work. The Contractor shall

- i. Allow use of scaffolding, toilets, sheds etc.
- ii. Properly co-ordinate their work with the work of other Contractors.
- iii. Provide control lines and benchmarks to his Sub-Contractors and the other Contractors.
- iv. Provide electricity and water at mutually agreed rates.
- v. Provide hoist and crane facilities for lifting material.
- vi. Co-ordinate with other Contractors for leaving inserts, making chases, alignment of services etc. at site.
- vii. Adjust work schedule and site activities in consultation with the Engineer-in-Charge and other Contractors to suit the overall schedule completion.

- viii. Resolve the disputes with other Contractor amicably and the Engineer-in-Charge shall not be made intermediary or arbitrator. The contractor shall indemnify the Department against any claim(s) arising out of such disputes.
- 6.24 The site of work shall be always kept clean due to constraints of space and to avoid any nuisance to the users of buildings in the adjacent plots. The Contractor shall take all care to prevent any water-logging at site. The wastewater, slush etc. shall not be allowed to be collected at site. It may be directly pumped into the creek with prior approval of the concerned authorities. For discharge into public drainage system, necessary permission shall be obtained from relevant authorities after paying the necessary charges, if any, directly to the authorities. The work shall be carried out in such a way that the area is kept clean and tidy. All the fees/charges in this regard shall be borne by the Contractor. Nothing extra shall be payable on this account.

6.25 PREVENTION OF NUISANCE AND POLLUTION

The Contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupants of the adjacent properties and to the public in general. The Contractor shall take all care, as not to damage any other adjacent property or other services running adjacent to the plot. If any damage is done, the same shall be made good by the Contractor at his own cost and to the entire satisfaction of the Engineer-in- Charge. The Contractor shall use such methodology and equipments for execution of the work, so as to cause minimum environmental pollution of any kind during construction, to have minimum construction time and minimum inconvenience to road users and to the occupants of the buildings on the adjacent plot and public in general, etc. He shall make good at his own cost and to the entire satisfaction of the Engineer in Charge any damage to roads, paths, cross drainage works or public or private property whatsoever caused, due to the execution of the work or by traffic brought thereon, by the Contractor. Further, the Contractor shall take all precautions to prevent any pollution of streams and waterways. All waste or superfluous materials shall be carted away by the Contractor, entirely to the satisfaction of the Engineer-in-Charge. Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants / users of adjoining buildings. No claim what so ever on account of site constraints mentioned above or any other site constraints not specifically stated here, shall be entertained from the Contractor. Therefore, the Contractors are advised to visit site and get first hand information of site constraints. Accordingly, they should quote their tenders. Nothing extra shall be payable on this account.

6.26 SCAFFOLDING

Wherever required for the execution of work, all the scaffolding shall be provided and suitably fixed, by the Contractor. It shall be provided strictly with steel double scaffolding system, suitably braced for stability, with all the accessories, gangways, etc. with adjustable suitable working platforms to access the areas with ease for working and inspection. It shall be designed to take all incidental loads. It should cater to the' safety features for workmen. Nothing extra shall be payable on this account. It shall be ensured that no damage is caused to any structure due to the scaffolding.

- 6.27 The Contractor shall maintain all the work in good condition till the completion of entire work. The Contractor shall be responsible for and shall make good, all damages and repairs, rendered necessary due to fire, rain, traffic, floods or any other causes. The Engineer-in-Charge shall not be responsible for any claims for injuries to person/workmen or for structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the Contractor or of any other of his representatives, in his employment during the execution of the work. The compensation, if any, shall be paid directly to the Department / authority / persons concerned, by the Contractor at his own cost.

- 6.28 For completing the work in given time frame, the Contractor might be required to work in two or more shifts (including night shifts).
- 6.29 In case of flooding of site on account of rain or any other cause and any consequent damage, whatsoever, no claim financially or otherwise shall be entertained not withstanding any other provisions elsewhere in the contract agreement. Also, the Contractor shall make good, at his own cost, the damages caused, if any.
- 6.30 The Contractor shall render all help and assistance in documenting the total sequences of this project by way of photography, slides, audio / video recording etc. Nothing extra shall be payable to Contractor on this account. However, cost of photographs, slides, audio / video-graphy etc shall be borne by the Department. The original films shall be the property of the Department. No copy shall be prepared without the prior approval of the Engineer- in Charge.
- 6.31 The Contractor shall make all necessary arrangements for protecting from rains, the work already executed and for carrying out the further work, during monsoon including providing and fixing temporary shelters, protections etc. Nothing extra shall be payable on this account. Also, no claims for hindrance shall be entertained on this account.
- 6.32 INCIDENTAL CHARGES**
For all items of work, all the incidental charges of any kind including cartage, storage, wastage and safe custody of material etc. shall be borne by the Contractor and no claim of any kind, whatsoever, shall be entertained on this account.
- 6.33 STORAGE OF MATERIAL AT SITE**
No inflammable materials including P.O.L shall be allowed to be stored in huge quantity at site. Only limited quantity of P.O.L may be allowed to be stored at site subject to the compliance of all rules / instructions issued by the relevant authorities in this regard. Also all precautions and safety measures shall be taken by the Contractor for safe handling of the P.O.L products stored at site. All consequences on account of unsafe handling of P.O.L shall be borne by the Contractor.

7.0 ADDITIONAL GENERAL CONDITIONS

- 7.1 The work shall be executed and measured as per metric dimensions given in the schedule of quantities, drawings etc. (FPS units wherever indicated are for guidelines only)
- 7.2 Any legal or financial implications resulting out of disposal of malba / dismantled material shall be sole responsibility of the contractor. Nothing extra shall be paid on this account. All the hidden items such as water supply lines, drainage pipes, conduits, sewers etc. are to be properly tested before covering. Non testing of lines may attract minimum 20% of amount withhold of that particular item of work. This shall only be released on satisfactory testing of pipes/system. Failing to test the lines shall attract recovery of 5% of amount that particular item head.
- 7.3 The contractor shall bear all incidental charges for cartage, storage and safe custody of materials brought to site.
- 7.4 The work shall be carried out in accordance with the Architectural drawings, structural and services drawings, to be issued from time to time Before commencement of any item of work, the contractor shall correlate all the relevant architectural, structural drawing and services issued for the work, nomenclature of items, specifications etc. and satisfy himself that the information available there from is complete and unambiguous. The discrepancy, if any, shall be brought to the notice of the Engineer-In-Charge for immediate decision before execution of the work. The contractor alone shall be responsible for any loss or damage occurring by the commencement of work on the basis of any erroneous and or incomplete information and no claim, whatsoever shall be entertained on this account.
- 7.5 The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Engineer-In-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of others.
- 7.6 The Architectural drawings other than those indicated in nomenclature of items are only indicative of the nature of the work and materials/fixings involved unless and otherwise specifically mentioned. However, the work shall be executed in accordance with the drawings duly approved by the Engineer-in-charge.
- 7.7 Contractor shall provide permanent bench marks, flags tops and other reference points for the proper execution of work and these shall be preserved till the end of work. All such reference points shall be in relation to the levels and locations, given in the Architectural and plumbing drawings.
- 7.8 The contractor shall give performance test of the entire installation (s) as per the standing specifications before the work is finally accepted and completion certificate is recorded by the Engineer-in-Charge. Nothing extra whatsoever shall be payable to the contractor for the test.
- 7.9 Any cement slurry added over base surface for continuation of concreting for better bond is deemed to have been included in the items and nothing extra shall be payable on this account, also the cement consumed on this account shall not be considered for theoretical consumption.
For RCC work, only factory made round type cover block shall be used
- 7.10 For brick work unless otherwise specified FPS bricks shall be used in all items of work. The classification of bricks brought by the contractor shall conform to the CPWD specifications.
- 7.11 The contractor get the water tested with regard to its suitability and conforming to the relevant IS-code. The contractor shall obtain written approval from the Engineer-in-Charge before he proceeds by using the same for execution of work.
- 7.12 The Contractor shall ensure compliance monitoring conditions as imposed by MOEF.
- 7.13 Responsibility to conduct field / Lab test and Testing Record of the test conducted at site shall be done & / maintained by contractor's staff. Regular checks of such field / Lab test / Recordings of results etc. shall be made by the subordinate staff of Engineer-in-charge. All record of field test in

Register's / Reports shall be maintained by the Quality Control staff deployed by the contractor at site and this record of test shall require to submit along with the bill payment.

- 7.14 The Quantities if shall vary more than the specified under schedule F, the contractor shall immediately inform but not later than 3 days to Engineer-in-charge in writing of such deviations. No claim whatsoever if intimation of such deviation are given later on shall be entertained.
- 7.15 The Contractor shall submit a detailed program in the form of CPM/PERT chart resource schedule to Engineer-in-charge within 10 days of award of work failing which compensation shall be levied at the rate of Rs. 500/- for each day of delay, till the actual date at submission of detailed program for not following the submitted program chart, the fine @ Rs. 500/- per day for delaying activity, and shall be got approved by him. The program chart should include the following:-
- a. Network CPM/PERT diagram prepared as per existing practice.
 - b. Descriptive note explaining sequence of various activities.
 - c. Program for procurement of material by the contractors.
- 7.16 The contractor shall have to use plate vibrators and needle vibrators wherever required as per item of the work.
- 7.17 All tools, plant and machinery provided by the contractor, shall, when brought to the site, be deemed to be exclusively intended for construction and completion of this work and the contractor shall not remove the same or any part thereof without the consent of the Engineer-in-charge.
- 7.18 Other agency doing works related with this project will also simultaneously execute the work and the contractor shall afford necessary facility for the same. The contractor shall leave necessary holes, opening extra for laying/burying in the work, pipes, cables conduits, clamps, boxes, boxes and hooks for fans clamps etc. as may be required for the other agency. Conduct for electrical wiring/cable will be laid in a way that they leave enough space for concreting and do not adversely effect the structural members, Nothing extra over the agreement rates shall be made to the contractor for stop boards.
- 7.19.1 For R.C.C./C.C. works any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been considered in the items and nothing shall be payable for extra cement in consumption of this account. The stop, boards used for construction at the end of days work shall not be considered as side shuttering and no extra payment shall be made to the contractor for stop boards.
- 7.19.2 The contractor shall apply cement wash on the reinforcement steel on arrival at site to prevent deformation/and rusting by constructing suitable length ponds for dipping reinforcement. Nothing extra shall be admissible.
- 7.19.3 The structural and architectural drawing shall at all times be properly correlated before executing any work. However, in case of any discrepancy in the item given in the schedule of quantities appended with the tender and Architectural drawing relating to the relevant item, the former shall prevail unless and otherwise given in writing by the Engineer-in-charge.

8.0 SPECIAL CONDITIONS FOR CEMENT & STEEL

8.1 CONDITIONS FOR CEMENT:-

- 8.1.1** The contractor shall procure 43 grade (confirming to IS 8112) ordinary Portland cement, as required in the work from reputed manufacturers of cement of approved make and having a production capacity of one million tonnes as approved by Ministry of Industry, Govt. of India such as ACC, L&T, JP, Leva, Vikram, Shree Ciment, Birla and cement corporation of India etc. holding license to use ISI certification mark for their product whose name shall be got approved from Engineer-In-Charge. The tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacture(s) which the tenderer proposes to use in the work. No change in the tendered rates will be accepted if the tender accepting authority does not accept the list of cement manufacturers, given by the tenderer fully or partially. Supply of cement shall be taken in 50 kg. Bags bearing manufacturers name and ISI marking, along with manufacturers test certificate for each lot. Samples of cement arranged by the contractor shall be taken by the Engineer-In-Charge and got tested in accordance with provisions of relevant BIS Codes. The cement for such testing purpose shall be supplied by the contractor free of charge. In case test results indicate that the cement arranged by the contractor does not conform to the relevant BIS Codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-In-charge to do so. The cost of test shall be borne as defined under additional general condition Para 1.2.
- 8.1.2** The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer-In-Charge. Each lot of cement 50 MT or smaller brought to site will be subjected to testing. Testing charges will be governed as per provisions of contract.
- 8.1.3** Cement bags shall be stored in two separate godowns, one for tested cement and the other for fresh cement (under testing) to be constructed by the contractor at his own cost as per sketches given in CPWD Specifications 2009 Vol.-I & II with correction slips issued upto the last date of Submission of tender having weather-proof roofs and walls. The size of the cement go down is indicated in the sketch for guidance. The actual size of god own shall be as per site requirements and nothing extra shall be paid for the same. Each go down shall be provided with a single door with two locks. The keys of one lock shall remain with Engineer-in-charge of the work and that of other lock with the authorized agent of the contractor at the site of work so that the cement is issued from god own according to the daily requirement with the knowledge of both parties. The account of daily receipt and issue of cement shall be maintained in a register in the prescribed Performa and signed daily by the contractor or his authorized agent and Engineer-in-charge or his authorized representative in token of its correctness. The day to day receipt and issue accounts of different grade/brand of cement shall be maintained separately in the standard Performa by the contractor or his authorised representative which shall be duly signed by the authorised representative of the Engineer-in-charge before issue to the work on day to day basis.
- 8.1.4** The capacity of each cement go-down shall be 2000 bags of cement or more as decided by the Engineer -in-charge and shall be constructed by the contractor at site of work and at the site of batching plant for which no extra payment shall be made. The contractor shall be responsible for the watch and ward and safety of the cement go-down. The contractor shall facilitate the inspection of the cement go-down by the Engineer-in-charge at any time.
- 8.1.5** The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in Clause-42 of the contract and shall be governed by the conditions laid therein app. 1870MT cement shall be required to execute this work.

- 8.1.6 If the quantity of cement actually used in the work is found to be more than the theoretical quantity of cement including authorized variation, nothing extra shall be payable to the contractor on this account. In the event of it being discovered that after the completion of the work, the quantity of cement used is less than the quantity ascertained as herein before provided (allowing variation on the minus side as stipulated in Clause - 42), the cost of quantity of cement not so used shall be recovered from the contractor as specified in schedule. Decision of the Engineer-in-charge in regard to theoretical quantity of cement which should have been actually used as per the schedule and recovered at the rate specified, shall be final and binding on the contractor.
For non-scheduled items, the decision of the Secretary regarding theoretical quantity of the cement which should have been actually used shall be final and binding on the contractor.
- 8.1.7 Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-charge.
- 8.1.8 In case the contractor brings surplus quantity of cement the same shall be removed from the site after completion of work by the contractor at his own cost after approval of the Engineer-in-charge.
- 8.1.9 The stacks of cement shall be in rows of two bags deep and 10 bags high with a minimum of 60 cm. clear space all-round. The bags should be placed horizontally continuous in each line as shown in the sketch given in General Conditions of Contract for APMC, AZADPUR . The sketch is only for guidance. Actual size & shape of go downs shall be as per site requirement and nothing extra shall be paid on this account.
- 8.1.10 The contractor shall submit original vouchers for the total quantity of cement supplied under each consignment. All consignment received at the work site shall be inspected by the Site staff along with the relevant documents before acceptance. The contractor shall obtain Original Vouchers and Test Certificates and furnish the same to the Engineer -in-Charge in respect of all the lots of cement brought by him to the site of work. The original vouchers and test certificates shall be defaced by the Site staff and kept on record in the site office.
Samples shall also been taken & got tested as defined under Para 1.1 above.
- 8.2 CONDITIONS FOR STEEL WORKS:-**
- 8.2.1 The contractor shall procure Thermo Mechanical Treated (TMT) Steel Reinforcement bars from Main producers of steel like SAIL, Rashtriya Ispat Nigam Ltd. TISCO. The documents in support of the purchase of steel shall be produced by the contractor along with the particulars of the manufacturer/supplier of steel for every lot of steel.
- 8.3 Specifications of thermo -mechanically treat bars (TMTbars):-**

i. Mechanical Properties

Parameter	Minimum Value
Yield Strength	415 N/mm sq.
Tensile Strength	500 N/mm sq.
Elongation Percentage	20%

ii. Chemical Properties

Chemical Constituents	Maximum Allowable Composition in %
Carbon	0.25
Sulphur	0.25
Phosphours	0.05
Sulphur + Phosphorus	0.10

iii. The contractor shall submit original vouchers from the manufacturer for the total quantity of steel supplied under each consignment to be incorporated in the work. All consignment received at the work site shall be inspected by the Site staff along with the relevant documents before acceptance. The contractor shall obtain Original Vouchers and Test Certificates and furnish the same to the Engineer -in-Charge in respect of all the lots of steel brought by him from approved supplier to the site of work. The original vouchers and test certificates shall be defaced by the Site staff and kept on record in the site office.

8.4 Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to BIS codes; the same shall stand rejected and shall be removed from the site of work by the contractor at his OWN cost within a week's time from written orders from the Engineer-in Charge to do so. Unless OTHERWISE specified elsewhere in the contract document, the testing (nominal mass, tensile strength, bend test, rebound test etc.) shall be done as per frequency of samples not less than as given below:-

Size of Bar	For consignment below 100 Tonnes	For Consignment Over 100 Tonnes
Under 10 mm dia	One sample for each 25 tonnes or part thereof.	One sample for each 40 tonnes or part thereof.
10mm to 16mm sdia.	One sample for each 35 tonnes or part thereof.	One sample for each 45 tonnes or part thereof.
Over 16mm dia.	One sample for each 45 tonnes or part thereof	One samaple for each 50 tonnes or plart thereof.

- 8.5 The steel reinforcement shall be brought to be site in bulk of 10 MT or as decided by the Engineer-in-Charge along with manufacturer test certificate for each lot.
- 8.6 The steel reinforcement shall be stored by the contractor at site of work about 30cm. to 45 cm. above ground. A coat of cement wash shall be given to steel bars when stored at site for long duration so as to prevent corrosion. Nothing extra shall be paid on these accounts. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.
- 8.7 The contractor shall supply free of charge the steel required for testing. The cost of tests shall be borne by the Department.
- 8.8 The Actual issue and consumption of steel on work shall be regulated and proper account maintained as per provision of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in Clause 42 of the contract and shall be governed by conditions laid therein.
- 8.9 The actual issue of steel shall be actual weight of total quantity of Steel received at the site less actual weight of balance quantity of steel lying unutilized at the work site.
- 8.10 Steel brought to site and steel remaining unused shall not be removed from site without the written permission of the Engineer-in-Charge.
- 8.11 TMT bars of appropriate grade from approved main producers having Thermax or Tempcore system of treatment and valid BIS license under IS: 1786 shall only be allowed to be used in the work.

However, in case of any unforeseen reasons, if TMT bars are not available in the market, from any of the main producers (for which the agency has to produce the non-availability certificate from main producers and non-availability to be approved by the Chief Engineer, APMC, AZADPUR use of TMT bars confirming to IS : 1786-1985 manufactured by secondary producers preferably, Rathi / Barnala having valid BIS license can be allowed. However, deduction in payment rate for such TMT bars of secondary producers shall be made at the market rate differences as certified by Secretary in writing or minimum rate of RS.1.50/= (Rupees One & fifty paise) per kg. less than the rate for TMT bar quoted by the contractor for this work. The decision of Secretary regarding reasonability of rates shall be final & Binding.

- 8.12 Reinforcement including authorized spacer bars and lap pages shall be measured in length of different diameters as actually (not more than as specified in the drawings) used in the work nearest to a centimeter. Wastage and unauthorized overlaps shall not be measured.
- 8.13 The standard sectional weights referred to as in Table IV in Para 5.3.3 in CPWD Specification 2009 Vol. -I & II with correction slips issued upto the last date of Submission of tender will be considered for conversion of length of various sizes of M.S. Bars, Tor Steel Bars and T.M.T. bars into Standard Weight.
- 8.14 Records of actual Sectional weights shall also be kept dia-wise and lot-wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer-in-Charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as Derived Actual Weight.
- 8.15
 - a. If the Derived Weight as in sub-Para (2.11) above is less than the Standard Weight as in Sub-Para (2.10) above then the Derived Actual Weight shall be taken for payment.
 - b. If the Derived Actual Weight is found more than the Standard Weight, the Standard Weight as per in sub-Para (2.10) above shall be taken for payment. In such case nothing extra shall be paid for the difference between the Derived Actual Weight and the standard Weight

9.0 PARTICULAR SPECIFICATIONS FOR STEEL WORK

9.1 Fabrication

Straightening, shaping to form, cutting and assembling, shall be as per 10.3.2 of CPWD Specification, 2009 as far as applicable, except that the words “riveted or bolted” shall be read as “welded” and holes shall only be used for the bolts used for temporary fastening as shown in drawings.

9.2 Welding : Welding shall generally be done by electric arc process as per IS 816 and IS 823. The electric arc method is usually adopted and is economical. Where electricity for public is not available generators shall be arranged by the contractor at his own cost unless otherwise specified. Gas welding shall only be resorted to using oxyacetylene flame with specific approval of the Engineer-in-charge. Gas welding shall not be permitted for structural steel work Gas welding required heating of the members to be welded along with the welding rod and is likely to create temperature stresses in the welded members. Precautions shall therefore be taken to avoid distortion of the members due to these temperature stresses.

The work shall be done as shown in the shop drawings which should clearly indicate various details of the joint to be welded, type of welds, shop and site welds as well as the types of electrodes to be used. Symbol for welding on plans and shops drawings shall be according to IS 813. As far as possible every efforts shall be made to limit the welding that must be done after the structure is erected so as to avoid the improper welding that is likely to be done due to heights and difficult positions on scaffolding etc. apart from the aspect of economy. The maximum dia of electrodes for welding work shall be as per IS 814. Joint surfaces which are to be welded together shall be free from loose mill scale, rust, paint, grease or other foreign matter, which adversely affect the quality of weld and workmanship.

9.3 Precautions: All operation connected with welding and cutting equipment shall conform to the safety requirements given in IS 818 for safety requirements and Health provision in Electric and gas welding and cutting operations.

Operation, Workmanship and process of Welding is described in Appendix B, similar shall be used in the Form of Code IS:256.

Inspection and testing of welds shall be as per IS 822.

9.4 Assembly: Before welding is commenced, the members to be welded shall first be brought together and firmly clamped or tack welded to be held in position. This temporary connection has to be strong enough to hold the parts accurately in place without any disturbance. Tack welds located in places where final welds will be made later shall conform to the final weld in quality and shall be cleaned off slag before final weld is made.

9.5 Erection :The specification shall be as described in 10.3.3 of CPWD Specification, 2009 except that while erecting a welded structure adequate means shall be employed for temporary fastening the members together and bracing the frame work until the joints are welded. Such means shall consists of applying of erection bolts, tack welding or other positive devices imparting sufficient strength and stiffness to resist all temporary loads and lateral forces including wind. Owing to the small number of bolts ordinarily employed for joints which are to be welded, the temporary support of heavy girders carrying columns shall be specially attended. Different members which shall be fillet welded, shall be brought into as close contact as possible. The gap due to faulty workmanship or incorrect fit if any shall not exceed. 1.5 mm if gap exceeds 1.5 mm or more occurs locally the size of fillet weld shall be increased at such position by an amount equal to the width of the gap.

9.6 Painting :Before the member of the steel structures are placed in position or taken out of the workshop these shall be painted as specified in para 10.2.2.

- 9.7 Measurements :** The mode of measurements shall be the same as specified in 10.2.4 except that weight of welding material shall not be added in the weight of members for payment and nothing extra shall be paid for making and filling holes for temporary fastening of members during erection before welding.
- 9.8 Rate :** The rate shall include the cost of all labour and materials involved in all the operations described above.
- 9.9 TUBULAR / HOLLOW SECTION TRUSSES**
Structural Steel Tube
 These shall be of:
 i) Hot finished welded (HFW) type, or
- 9.10** Tubes shall be designated by their nominal bore. These shall be light, medium or heavy as specified depending upon the wall thickness. The standard size and weights of tubes are listed in Appendix C.
 i. Hollow sections shall be as per IS 4923.
- 9.11** Tubes shall be clean finished and reasonably free from scale. They shall be free from cracks, surface flaws, laminations and other defects. The ends shall be cut clean and square with axis of tube, unless otherwise specified.
- 9.12 Minimum Thickness of Metals :** Wall thickness of tubes used for construction exposed to weather shall be not less than 4 mm and for construction not exposed to weather it shall be not less than 3.2 mm where structures are not readily accessible for maintenance, the minimum thickness shall be 5 mm.
- 9.13 Fabrication :** The component parts of the structure shall be assembled in such a manner that they are neither twisted nor otherwise damaged and be so prepared that the specified cambers, if any, are maintained. The tubular steel work shall be painted with one coat of approved steel primer after fabrication. All fabrication and welding is to be done in an approved workshop. The joint details shall be generally as per S.P-38 of B.I.S publication.
- 9.14 Straightening:** All material before being assembled shall be straightened, if necessary, unless required to be of curvilinear form and shall be free from twist.
- 9.15 Bolting:** Washers shall be specially shaped where necessary, or other means, used to give the nuts and the heads of bolts a satisfactory bearing. In all cases, where the full area of the bolts is to be developed, the threaded portion of the bolt shall not be within the thickness of the parts bolted together and washers of appropriate thickness shall be provided to allow the nuts to be completely tightened.
- 9.16 Welding :** Where welding is adopted, it shall be as per IS 816. *Caps and Bases for Columns :* The ends of all the tubes, for columns transmitting loads through the ends, should be true and square to the axis of the tubes and should be provided with a cap or base accurately fitted to the end of the tube and screwed, welded or shrunk on. The cap or base plate should be true and square to the axis of the column.
- 9.17. Sealing of Tubes :** When the end of a tube is not automatically sealed by virtue of its connection by welding to another member the end shall be properly and completely sealed. Before sealing, the inside of the tubes should be dry and free from loose scale.
- 9.18 Flattened Ends :** In tubular construction the ends of tubes may be flattened or otherwise formed to provide for welded. Riveted or bolted connections provide that the methods adopted for such flattening do not injure the material. The change of sections shall be gradual.
- 9.19 Hoisting and Erection :** Tubular trusses shall be hoisted and erected in position carefully, without damage to themselves, other structure, equipment and injury to workman. The method of hoisting and erection proposed to be adopted shall be got approved from the Engineer-in-charge. The

contractor shall however be fully responsible, for the work being carried out in a safe and proper manner without unduly stressing the various members. Proper equipment such as derricks, lifting tackles, winches, ropes etc. shall be used.

- 9.20 Measurements :** The work as fixed in place shall be measured in running metres correct to a centimeter on their weights calculated on the basis of standard tables correct to the nearest kilogram unless otherwise specified. Weight of cleats, brackets, packing pieces bolts nuts, washers distance pieces separators diapharam gussesets (taking overall square dimensions) fish plates, etc. shall be added to the weight of respective items unless otherwise specified. No deduction shall be made for skew cuts.
- 9.21 Rate :** The rate shall include the cost of labour and materials involved in all the operations described above including application of one coat of approved steel primer, i.e. red oxide zinc chrome primer conforming to IS 2074.

10.0 PARTICULAR SPECIFICATIONS FOR EXECUTION OF WORK

- 10.1 **CURING**:- All works involving cement i.e. cement concrete, brick work cement plaster etc. shall be properly cured by keeping them constantly moist for at least a period of one week casting.

10.2 FORM WORK

- 10.2.1 The work shall be done in general as per CPWD Specification 2009 Vol. -I & II with correction slips issued upto the last date of Submission of tender.
- 10.2.2 The contractor has to arrange at site centering and shuttering of adequate plan area. Only M.S. centering shuttering and scaffolding material unless & otherwise specified shall be used for all R.C.C. work to give an even finish of concrete surface. However, marine-ply shuttering in exceptional cases as per site requirement may be used on specific request from contractor to be approved by the Engineer-in-charge.
- 10.2.3 Steel shuttering as approved by the engineer-in-charge shall be used by the contractor. Minimum size of shuttering plates shall be 600mm x 900mm except for the case when closing pieces required completing the shuttering panels.

Dented, broken, cracked, twisted or rusted shuttering plates shall not be allowed to be used on the work.

The shuttering plates shall be cleaned properly with electrically driven sanders to remove any cement slurry or cement mortar or rust. Proper shuttering oil or de-bonding compound shall be applied on the surface of the shutter plates in the requisite quantity before assembly of steel reinforcement.

10.3 REINFORCEMENT:-

- 10.3.1 The reinforcement shall be done as per CPWD Specification 2009 Vol. -I & II with correction slips issued upto the last date of Submission of tender.
- 10.3.2 The rate of item of reinforcement of RCC work includes all operations including straightening, cutting, bending, welding, binding with annealed steel or welding and placing in position at all the floors with all leads and lift complete as per CPWD Specification 2009.
- 10.3.3 The contractor shall provide approved type of support for maintaining the bars in position and ensuring required spacing and correct cover of concrete to reinforcement as called for in the drawings, spacer blocks of required shape and size. Chairs and spacer bars shall be used in order to ensure accurate positioning of reinforcement. Spacer blocks shall be cast well in advance with approved proprietary pre-packed free flowing mortars of high early strength and same colour as surrounding concrete precast cement mortar/concrete blocks/blocks of polymer shall not be used as spacer blocks unless specially approved by the Engineer-in-charge, rate of RCC items is inclusive of cost of such cover blocks.
- 10.3.4 The reinforcement bars not to be placed directly on the ground, in rainy season, due to lack of drainage, the water accumulates causing considerable corrosion of steel to avoid this, steel bars should be stored about 30 to 45 cm above ground. A coat of cement wash should be given to steel bars. Nothing extra shall be paid on this account.

10.3.5 TMT bars of appropriate grade from approved main producers having Thermax or Tempcore system of treatment and valid BIS licence under IS: 1786 shall only be allowed to be used in the work. However, in case of any unforeseen reasons, if TMT bars are not available in the market, from any of the main producers (for which the agency has to produce the non-availability certificate from main producers and non-availability to be approved by the Chief Engineer, APMC, AZADPUR use of TMT bars confirming to IS : 1786-1985 manufactured by secondary producers preferably, Rathi / Barnala having valid BIS licence can be allowed. However, deduction in payment rate for such TMT bars of secondary producers shall be made at the market rate differences as certified by Secretary in writing or minimum rate of RS.1.50/= (Rupees One & fifty paisa) per kg. less than the rate for TMT bar quoted by the contractor for this work. The decision of Secretary regarding reasonability of rates shall be final & binding.

10.4 Third Party Quality Assurance

The work shall be started only after appointment of third party/consultant.

The 3rd party quality assurance is likely to be carried out by one of the agencies i.e. DTU, IIT Delhi, IIT Roorkee, NCCBM, CRRI, EIL, RITES, WAPCOS, PEC Chandigarh or any other agency as decided by the Engineer-in-charge. The decision of Engineer-in-charge in this regard shall be final and binding on the contractor. The 100% of the work carried out by the contractor is subjected to check by any of the third party mentioned above apart from the DAMB/APMC azadpur officers. All necessary field/lab test (s) as per CPWD/internal specifications shall be carried out by the consultants through their in-house labs or any other reputed lab for the correctness of the test result.

The sample shall be collected and sealed by the consultant for quality check in the presence of contractor and departmental officers and shall be signed by all three parties in the prescribed form taken of their acceptance. However, the test to be carried out by the consultant/third party from external laboratory the contractor shall supply the material free of charge including transporting to the laboratory.

The contractor shall provide all necessary support, co-operation assistance in obtaining the sample and carrying out the field/laboratory test as required by third party from time to time. This may include provisions of labour assistance in packing and dispatching of materials etc. and any other assistance considered necessary in connection with quality control in works.

11.0 LIST OF PREFERRED APPROVED MAKES FOR CIVIL WORKS

- | | | |
|----|-------------------------|---|
| 1. | Synthetic Enamel Paints | Burger (Luxol gold), Asian (Apolite)
ICI Dulux (Gloss), Nerolac (Full gloss hard drying) |
| 2. | M.S.Pipe | GSF, Jindal Hisar, Prakash Surya, Appolo |
| 3. | Admixture for concrete | Cico, Sika, Pidilite, Asian |
| 4. | Epoxy Paint | Nerolac ,CICO, Fosroc |
| 5. | Steel Section/ TMT Bars | SAIL,TISCO,RINL, RATHI, BARNALA, JINDAL etc. |

12.0 Special Condition for Electric work

- 12.1 The work shall be carried out strictly in accordance with CPWD specifications for electrical 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.
- 12.2 All materials to be used on this work by the contractor shall be got approved from the Engineer-in-Charge before installation at site.
- 12.3 The drawing/design of panel board used on this work by the contractor shall be got approved from the Engineer-in-Charge before fabrication and installation at site.
- 12.4. 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 be completed within 30 days of the date of completion civil work.
- 12.5 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.
- 12.6 Earthing & Cable laying shall invariably be done in the presence of the Engineer-in-Charge or his authorized representative.
- 12.7 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.
- 12.8 The contractor shall make his own arrangement at his own cost for electric/general tools and plants required for the work.
- 12.9 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.
- 12.10 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.
- 12.11 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.
- 12.12 The contractor shall make his own arrangement for storage of materials either brought by him or provided to him by the department.
- 12.13. Plastic nameplate or identification tags/slips shall be provided on the cubical /switchboard/DBS/Wires to indicate the area fed by them.
- 12.14. All termination of cables submain/circuit wire & 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.
- 12.15. 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 form 'D' 31/32 (Road permit) shall be issued by the deptt. The road permit shall be arranged by the tenderer on his own.
- 12.16. 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.
- 12.17. The execution of job shall be done in workman like manner like manner to give structurally sound and neat appearance.

- 12.18. 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.
- 12.19. After award of work, firm shall submit the sample of LED lights fixture along with technical specification of the fixture for testing of its illumination CRI value (more than 80). Testing of the LED lights fixtures will be done in the lab as per LM-70 specification for lights. It is also to clear the cost of Lab shall be bear/borne by the firm only.
- 12.20. The contractor shall supply necessary test certificate from the manufacture for LED lights fixture and electrical items i.e. cables and wires. The firm shall also provide one year guarantee of all the electrical items except LED lights fixtures from the date of completion of work. The material should be reputed company and of ISI mark.
- 12.21. The firm shall give five years unconditional replacement guarantee for LED lights fixtures from the date of completion of work. In this regard, firm/company has to submit a bank guarantee equal to SD amount for five years.
- 12.22. The firm shall submit purchase proof of LED, Luminous intensity report, Thermal management report and environment protection report from the manufacture.

Vivek Chauhan
Executive Engineer

13.0 LIST OF APPROVED MAKE

<u>Item</u>	<u>Make</u>
1. Fans	Almonard, PILOT
2. Aluminium Cable	Havell's, Polycab, KEI, Plaza, Finolex
3. Pole Box	Sintex
4. Change over Switch	C & S, Havell's, L & T, ABB, Standard
5. Incandescent lamp	Surya, Bajaj, Philips, Osram
6. MCB	Crabtree, Legrand, ABB, L & T, C & S, Schneider
7. MCCB	Havell's, Legrand, ABB, L&T, C & S, Schneider
8. Switch/Socket	Anchor, Cona, Havell's
9. Copper Wire/Cable	Plaza, Havell's, Polycab, KEI, Finolex
10. Aluminium Lugs	JV 14, Action, Dowell's
11. Timer	L & T, Hager, Crabtree, Siemens, Schneider
12. Contactor	L & T, Schneider, GE, Hager, C & S
13. Steel Wire Rope	Usha Martin, Knew Martin, Mahadev. Indef, Tufropes
14. LED Lights:	Philips, Bajaj, Havells, Wipro, Crompton
15. Bus bar chamber	Havells, Benlo, L&T, C&S

14.0 CORRECTION SLIP

- i) Wherever, there is a reference of CPWD officers it shall construed to mean officers and other staff of Delhi Agricultural Marketing Board as applicable therein.
- ii) The reference of government in the tender form shall constructed to means Delhi Agricultural Marketing Board 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) The contractor shall obtain a valid licence of the enrolment 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.

**Executive Engineer,
APMC Azadpur**

FAIR WAGES SCHEDULE

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

15.0 FORM OF BANK GUARANTEE BOND

In consideration of the SECRETARY, APMC, AZADPUR (hereinafter called "APMC, AZADPUR") having agreed to exempt (Hereinafter called the said contractor(s) from the demand under the terms and conditions of Tender No. invited for the work of

.....
(Hereinafter called "The said tender") part earnest money for compliance of his obligations in accordance with the terms and conditions of the said tender, on production of a irrevocable Bank Guarantee for Rs. (Rupees only), we (indicate the name of the bank) (hereinafter referred to as "the Bank) hereby undertake to pay to APMC, AZADPUR an amount not exceeding Rs. (Rupeesonly) on demand by APMC, AZADPUR.

2. We (indicate the name of the bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demure. merely on a demand from APMC, AZADPUR stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However. our liability under this guarantee shall be restricted to an amount not exceeding Rs. (Rupees..... only).

3. We (indicate the name of the bank) the said bank further undertake to pay to APMC, AZADPUR any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal.

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

4. We (indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the said tender and that it shall continue to be enforceable till all the dues of APMC, AZADPUR under or by virtue of the said tender have been fully paid and its claims satisfied or discharged or till Engineer-in-charge on behalf of APMC, AZADPUR certified that the terms and conditions of the said tender have been fully and properly carried out by the said contractor (s) and accordingly discharges this guarantee.
5. We (indicate name of the bank)- further agree with APMC, AZADPUR that APMC, AZADPUR shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said tender or to extend time of tender by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by APMC, AZADPUR against the said contractor(s) and to for bear or enforce any of the terms and conditions relating to the

said tender and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor(s) or for any forbearance, act of omission on the part of APMC, AZADPUR or any indulgence by APMC, AZADPUR to the said contractor(s) or by any such matter of thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
7. We (indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of APMC, AZADPUR in writing.
8. This guarantee shall be valid upto unless extended on demand by APMC, AZADPUR. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Date the day of for
.....
(indicate the name of Bank).

AFFIDAVIT

I/We have submitted a Bank Guarantee for the work

(Name of work)
 Agreement No. dated from

(Name of the Bank with full address)

to the Executive Engineer..... with a view to seek exemption from payment of security deposit/performance guarantee in cash. This bank guarantee expire on I/We undertake to keep the validity of the bank guarantee intact by getting it extended from time to time at my/our initiative upto a period of months after the recorded. date of completion of the work or as directed by the Engineer-in-charge.

I/We also indemnify APMC, AZADPUR against any losses arising out of non encashment of the bank guarantee, if any.

Note: The affidavit is to be given by the executant before a first class Magistrate

**GUARANTEE TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS
AFTER COMPLETION IN RESPECT OF RAINWATER HARVESTING WORKS**

The agreement made this day ofbetween
..... S/o (hereinafter called the
GUARANTOR of the one part) and the SECRETARY, APMC, AZADPUR (hereinafter called APMC,
AZADPUR of the other part)

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract) dated
..... and made between the GUARANTOR OF THE ONE PART AND APMC,
AZADPUR of the other part whereby the contractor interalia undertook to development work of site in
the said contract recited including Rainwater Harvesting .

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said work will
remain perfect and operation for the defined maintenance period from the date of completion of work.

NOW THE GUARANTOR hereby guarantee that work executed by him will render the structures
completely operational for 5 years to be reckoned form the date after the expiry of maintenance period
prescribed in the contract.

The decision of the Engineer-in-charge with regard to nature and cause of defect shall be final and
binding on Guarantor.

During this period of guarantee, the guarantor shall make good all defects and in case of any defect
being found, render the structure operational to the satisfaction of the Engineer-In-Charge calling upon
him to rectify the defects failing which the work shall be got done by the Department by some other
contractor at the Guarantor's cost and risk. The decision of the Engineer-in-charge as to the cost payable
by the Guarantor shall be final and binding.

IN WITNESS WHEREOF these presents have been executed by the obligator and
.....by..... for and on behalf of the SECRETARY,
APMC, AZADPUR on the day, month and year first above written.

SIGNED, sealed and delivered by OBLIGATOR in the presence of:-

1. 2.

SIGNED FOR AND BEHALF OF THE SECRETARY, APMC, AZADPUR BY..... in the
presence of :-

1. 2.

16. Confirmation

I/We conform that the NIT, General and Salient points to the General condition, Additional General Condition, Special Condition, Particular Specification and other details appended in the documents have been fully examined and fully cognizance taken therein for arriving at the item unit prices and total amount and tendered sums contained therein my/our tender.

Contractor

AGRICULTURAL PRODUCE MARKETING COMMITTEE
MARKET OF NATIONAL IMPORTANCE
NEW OFFICE COMPLEX, NFM- PH-II, SARAI PIPAL THALLA, AZADPUR, DELHI-33

Schedule of Quantity

Estimate Cost:3,26,43,238/-

Earnest Money: 6,53,000/-

Time of Completion: 4 Months

Name of Work: Dismantling and Reconstruction of shed no. 10 in NFM, Azadpur.

Sub Head: Construction work

S No	Description	Quantity	Unit	Rate	Amount
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. All kinds of soil	2975.00	Cum		
2	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	1505.00	Cum		
3	Supplying and filling in plinth with Jamuna sand under floors, including watering, ramming, consolidating and dressing complete.	296.00	cum		
4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				

4.1	1:4:8 (1 Cement : 4 Coarse Sand : 8 Graded stone aggregate 40 mm nominal size).	514.00	Cum		
4.2	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	45.00	Cum		
5	Centering and shuttering including strutting, propping etc.and removal of form work forup to Plinth Level :				
5.1	Foundations, footings, bases for columns.	616.00	Sqm.		
5.2	suspended floors, roofs, balconies, landings	26.00	Sqm.		
5.3	Lintel, Plinth Beam, gurdars, etc.	260.00	Sqm.		
5.4	Columns, piers, abutments, pillars, posts and struts.	297.00	Sqm.		
6	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.				
6.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	167.00	cum		
6.2	Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)	430.00	cum		
7	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in-charge.	166.00	cum		

8	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge. In cement mortar	111.00	cum		
9	Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50metres lead.	50205.00	Kg.		
10	Disposal of building rubbish/malba/ similar unserviceable, dismantled or waste material by mechanical means, including loading, transportation, unloading to approved municipal dumping ground or as approved by Engineer in Charge, beyond 50m initial lead, for all leads including all lifts involved.	2350.00	Cum		
11	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	451.24	Cum.		
12	Reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete. Thermo-Mechanically Treated bars	51000.00	Kg.		
13	Brick work with F. P. S. bricks of class designation 75 in foundation and plinth Cement mortar 1:6 (1 Cement : 6 Coarse sand)	200.00	Cum		
14	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level. Cement mortar 1:4 (1 cement :4 coarse sand)	3.00	Sqm.		
15	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete. 40mm thick with 20mm nominal size of stone aggregates.	2.00	Sqm.		
16	62 mm thick cement concrete flooring with concrete hardener topping, under layer 50 mm thick cement concrete 1:11/3:3 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) and top layer 12mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate, 6mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacture's specifications. This includes cost of	2260.00	Sqm		

	cement slurry, but excluding the cost of nosing of steps etc. complete.				
17	15 mm cement plaster 1:3 (1 cement:3 coarse sand) with a floating coat of neat cement on the rough side of single or half brick wall:	180.00	Sqm		
18	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete.				
18.1	300 mm dia. R.C.C. pipe	180.00	metre		
18.2	450 mm dia. R.C.C. pipe	30.00	metre		
19	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS: 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's moment identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	20	each		
20	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary panel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :	8	each		

	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5				
21	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	2	metre		
22	Constructing brick masonry circular manhole 1.22 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design : .68 m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	6.00	each		
23	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) with pre- cast R.C.C. vertical grating complete as per standard design: With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	30.00	each		
24	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of NP2 RCC pipes up to 450mm diameter including bed concrete as per standard design :	210.00	metre		

25	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality HD - 20 Circular shape 560 mm internal dia.	10	each		
26	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	18	cum		
27	Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 meter lead as per direction of Engineer-In- Charge.	243.00	metre		
28	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	53500.00	Kg		
29	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete. Hot finished welded type. (HFW)	106220.00	Kg		
30	Providing and fixing mild steel round holding down bolts with nuts and washer plates complete.	1450.00	Kg		
31	Providing and fixing bolts including nuts and washer complete.	270.00	Kg.		
32	Providing and fixing pre-coated galvanized iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %), total coated thickness with zinc coating 120 gm per sqm as per IS:277 in 240 m p a steel grade, 5-7 microns epoxy	3000.00	Sqm.		

	primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.				
33	Providing and fixing pre-coated galvanized steel sheet roofing accessories 0.50 mm (+ 0.05 %) total coated thickness, Zinc coating 120 gm per sqm as per IS: 277 in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws complete :				
33.1	Ridges plain (500 - 600mm).	90.00	metre		
33.2	Gutter .(600 mm over all girth).	180.00	metre		
34	Providing and fixing 18mm thick gang saw cut, mirror polished pre molded and pre polished, machine cut for kitchen platform, vanity counters, window sills, facias and similar location at required shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 Cement: 4coarse sand) joints treated with white cement, mixed with matching pigment epoxy touch ups, including rubbing, curing, molding and polishing to edges to give high gloss finished etc. complete with all levels. Raj Nagar Plain white marble/ Udaipur green marble/ Zebra black marble. Area of slab over 0.50 sqm.	255.00	sqm		
35	Chaquered precast cement concrete tiles 22 mm thick in footpath & courtyard, jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete, on 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand). Ordinary cement without any pigment	95.00	sqm		
36	12 mm cement plaster of mix 1:6 (1 Cement: 6 coarse sand)	75.00	sqm		

37	Finishing walls with water proofing cement paint of required shade: New work (Two or more coats applied @ 3.84 kg/10 sqm)	75.00	sqm		
38	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade : Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.	3450.00	sqm		
39	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	12.00	cum		
40	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	8.00	cum		
41	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -in-charge.	8.00	cum		
42	Gravel packing in tube well construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-In-charge.	8.00	cum		
43	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M - 30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.	330.00	Sqm		
44	Supply and of 2mm thick clear embossed polycarbonate sheet having Trapezoidal profile matching to the roofing and cladding sheet. Sheet should have protective guard film of 25 microns to the minimum to avoid scratches while transportation and should be supplied in single length of 12 meter or as advised by engineer in charge. the sheet shall be fixed using self drilling/self tapping screws of size (5.5x55mm) with EPDM seal or with polymer coated J or L hooks, bolts and nuts 8mm diameter with bitumen and GI limpet washers or with G.I limpet washers filled with white lead complete up to any horizontal/vertical or curved surfaces	400.00	sqm		

	excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.				
45	Providing and fixing 62 mm wide 4mm thick aluminum strip in flooring complete in all respects as per direction by Engineer-In-charge.	2820.00	metre		
46	Providing and fixing on wall face MS bend of 114.30 mm dia including welding, cutting, fixing in proper position complete in all respect as per direction of Engineer-In-charge.	140.00	each		
47	Credit for opening/un-sewing/cutting of MS Structural/Tubular pipe members i.e. MS Columns, MS trusses, purlins and base plate etc. (With sheet in roofing) by manual or by mechanical equipment for remaining part of shed no. 10 on "as is where is basis" including disposal of Dismantled material with all necessary precautions of labour/traders in all parameters, the weigh slip of each truck to be deposited with departments (size of shed is 83.75mx30m heaving approx weight (50205 Kg x Rs.19.00 =9,53,895/-) with consideration to depreciation of 20%(10% wastage + 10% depreciation) on the Theoretical weight of 62755.90kg	50205.00	Kg.		
A.	Electricals Works Boxes , sockets and cable trays				
48	Supplying and fixing metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc. as required.(For connecting the cable using with glands for lighting fixtures.) 200 mm X 125 mm X 60 mm deep	60	Each		
49	For charging points Supplying and fixing following piano type switch /socket on the existing switch box/cover including connections etc. as required 5/6A switch.	120	Each		
50	For charging points Supplying and fixing following piano type switch /socket on the existing switch box/cover including connections etc. as required 3Pin5/6A Socket out let	120	Each		

51	Supplying and installing following size of perforated painted with powder coating M.S.cable trays with perforation not more than 17.5%,in convenient sections ,joined with connectors ,suspended /supported on existing truss/column with M.S angle of suitable size including all accessories ,painting suspenders etc. as required 450mm width x50mm depth x2mm thickness.	200	Mtrs.		
52	Installation, testing and commissioning of wall bracket /ceiling fittings of all sizes and shapes containing upto two GLS/CFL/ LED lamps per fitting, complete with all accessories including connections etc. as required.	172	Each		
53	Installation, testing and commissioning of exhaust fan /air circulator of all sizes and , complete with all accessories including connections etc. as required. 750mm sweep air circulator.	64	Each		
54	Numbering of air circulators / exhaust fan / fluorescent/LED fittings as required.	236	Each		
B.	Earthing				
55	Earthing with G.I. earth pipe 4.5 meter long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	1	Set		
56	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/ coke and salt as required.	1	Set		
57	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I.pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.(Buried in floor)	20	Mtr.		
58	Providing and fixing 25 mm x 5 mm G.I. strip on surface or in recess for connections etc. as required.(On cable tray, coloumn & truss connecting the SDB-1,SDB-2,SDB-3,LDB-1,LDB-2,FDB-1&FDB-3)	450	Mtr.		
C.	MV Cable Laying				

59	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1KV grade of following size on existing cable tray /truss as required. Upto 35 sq. mm(Clamped with 1mm thick saddle)	2900	Mtr.		
60	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1KV grade of following size in the existing masonry open duct as required. Upto 35 sq. mm meter	900	Mtr.		
61	Above 35 sq. mm and upto 95 sq. mm	1400	Mtr.		
62	Providing and fixing 6SWG dia GI wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required & For power cable supporting)	2450	Mtr.		
D.	MV Cable Supplying.				
63	Supplying of PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size.(Copper conductor armoured cable). 2.5 sq.mm.ISI marked FRLS PVC Insulated ,single core copper conductor cable (for light points+charging points)	250	Mtr.		
64	Supplying of PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size.(Copper conductor armoured cable). 4 sq.mm.ISI marked FRLS PVC Insulated ,single core copper conductor cable (for light points+charging points).(For air circulator fans.)	200	Mtr.		
E	MV Cable Jointing & End Termination				
65	Supplying and making end termination with brass compression gland and aluminum lugs for following size of PVC insulated and PVC sheathed / XLPE aluminum conductor cable of 1.1 kV grade as required 4Cx16 sq.mm. A2XFY	8	Each		
66	Supplying and making end termination with brass compression gland and aluminum lugs for following size of PVC insulated and PVC sheathed / XLPE aluminum conductor cable of 1.1 kV grade as required 3 1/2C X 35 sq.mm. A2XFY	4	Each		

67	Supplying and making end termination with brass compression gland and aluminum lugs for following size of PVC insulated and PVC sheathed / XLPE aluminum conductor cable of 1.1 kV grade as required 3 1/2C X 50 sq.mm. A2XFY	2	Each		
F	Electrical Panels_ SDB's , FDB's and LDB's				
68	Supply, installation, testing and commissioning of 3phase and neutral 415V 4 wire surface mounted indoor type SDB/DB made out of 14 SWG sheet after seven tank process and painting with epoxy powder coating MV electrical SDB/DB shall be dust and vermin proof ,hinged and locable doors.The SDB/DB shall consist of suitable rating TPN bus bar at the rating of 0.8A /SQMM Supported by DMC/SMC insulator and color coded with heat shrinkable sleeves .The SDB/DBI shall have short circuiting with standing capacity of minimum 36KA and consist of the switch gear as mentioned below .The SDB/DBI shall got fabricated from manufacturer with CPRI test certificate .The SDB/DBI shall be mounted on MS angle iron frame duly painted including supply and fixing of the same. SDB-1 for Air Circulator Fan	1	Set		
a)	Enclosure				
69	Enclosure, 200A TPN 415V 50Hz Electrolytic grade Al Busbar, Internal Wiring, Terminals, etc.as required.	1	Set		
b)	INCOMING				
70	Phase Indication Lamp with Control MCB	1	Set		
71	MCCB 100A 36KA 4P	1	Each		
72	Spreader Link	1	Set		

73	Operating Handle	1	Set		
74	Mounting frame made out from 50 x50 x6mm thick frame duly painted.	1	Set		
75	OUTGOING MCB 63A 4P	3	Each		
F.2	SDB-2 for Charging Point	1	Set		
a)	Enclosure				
76	Enclosure, 200A TPN 415V 50Hz Electrolytic grade Al Busbar, Internal Wiring, Terminals, etc.as required.	1	Set		
b)	INCOMING				
77	Phase Indication Lamp with Control MCB	1	Set		
78	MCCB 100A 36KA 4P	1	Each		
79	Spreader Link	1	Set		
80	Operating Handle	1	Set		
81	Mounting frame made out from 50 x50 x6mm thick frame duly painted.	1	Set		
c)	OUTGOING				
82	MCB 63A 4P	4	Each		
90	SDB-3 for Lighting	1	Set		

a)	Enclosure				
91	Enclosure, 200A TPN 415V 50Hz Electrolytic grade Al Busbar, Internal Wiring, Terminals, etc.as required.	1	Set		
b)	INCOMING				
92	Phase Indication Lamp with Control MCB	1	Set		
93	MCCB 100A 36KA 4P	1	Each		
94	Spreader Link	1	Set		
95	Operating Handle	1	Set		
96	Mounting frame made out from 50 x50 x6mm thick frame duly painted.	1	Set		
c)	OUTGOING				
97	MCB 63A 4P	3	Each		
F.4	Distribution Board-1 (FDB - 1 & 2 for Air Circulator)	2	Set		
a)	Enclosure				
98	Enclosure, 100A TPN 415V 50Hz Electrolytic grade CU Busbar, Internal Wiring, Terminals, etc.as required.	1	Set		
b)	INCOMING				

99	Phase Indication Lamp with Control MCB	1	Set		
100	MCB 63A 4P	1	Each		
101	Mounting frame made out from 50 x50 x6mm thick frame duly painted.	1	Set		
c)	OUTGOING				
102	MCB 32A 4P	8	Each		
103	Distribution Board-2 (LDB - 1 & 2 For Lighting)	2	Set		
a)	Enclosure				
104	Enclosure, 100A TPN 415V 50Hz Electrolytic grade CU Busbar, Internal Wiring, Terminals, etc.as required.	1	Set		
b)	INCOMING				
105	Phase Indication Lamp with Control MCB	1	Set		
106	MCB 40A 4P	1	Each		
107	Mounting frame made out from 50 x50 x6mm thick frame duly painted.	1	Set		
c)	OUTGOING				
108	MCB 32A 4P	10	Each		
G	Supplying of power cables, cable jointing &end termination				

G1	Supplying of PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size.(Copper conductor armoured cable).				
109	5C x 2.5 sq.mm.YWY(for light points+charging points)	1100	Mtr.		
110	4Cx4sq.mmYWY.(For air circulator fans.)	900	Mtr.		
111	4Cx6sq.mmYWY(For out side lighting).	250	Mtr.		
112	Supplying of PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size.(Al.conductor armoured cable).				
112.1	4Cx16 sq.mm. A2XFY(For LDBS&FDBS)	200	Mtr.		
112.2	3 1/2C X 35 sq.mm. A2XFY(For SDB-2&SDB-3)	1000	Mtr.		
112.3	3 1/2C X 50 sq.mm. A2XFY(For lighting SDB-1)	900	Mtr.		
113	Supplying and making end termination with brass compression gland and copper lugs for following size of PVC insulated and PVC sheathed / XLPE copper conductor cable of 1.1 kV grade as required				
113.1	5C x 2.5 sq.mm.YWY	474	Each		
113.2	4Cx4sq.mmYWY.	128	Each		
113.3	3Cx2.5sq.mmYWY	10	Each		
113.4	3Cx4sq.mmYWY	10	Each		
113.5	4Cx6sq.mmYWY	40	Each		
H	<u>Lighting fixtures & junction boxes.</u>				

114	Supply, of following LED flood/street light fittings as per attached specifications with five years unconditional replacement gurantee for LED fixture & complete with control driver,LED lamps, fixing and mounting accessories as required. Samples shall besubmitted by contractor for approval of owner.(Make--Philips,Wipro,Crompton,Havells)				
114.1	30W LED flood light	152	Each		
114.2	90W LED Street light	20	Each		
114.3	750 mm dia. Sweep Heavy duty Almonard/Bajaj/Usha make Air Circulator. Two years warranty	64	Each		
114.4	Supply and fixing the bracket for out door lighting made out from 40mm dia 5mm thick GI pipe complete with fixing accessories as required.	20	Each		
115	Supplying and fixing of hot press moulded SMC Junction boxes with 100A 415V TPN copper bus bar+Earth link fixed on insulator ,nut bolts,fixing clamps and complete in alrespect as required.(Sintex make box size 230x170x105mm) .(For connecting the cable using with glands for lighting fixtures &charging points.)-Sintex make	285	Each		
		Total			

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 the contractor with Seal

