



Office of the Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited

Notice Inviting e-Tender for
**Construction of three storied food court and air-conditioned restaurant near aquarium at
Zoological Garden, Alipore, Kolkata-700027**

NIT No: 08/29-45/22-23/2023-24 (5th Call)



Office of the Divisional Manager, Kolkata Forest Corporation Division,
West Bengal Forest Development Corporation Limited
'Aranya Bikash', KB-19, Sector-III, Salt Lake City, Kolkata – 700 106
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Memo No. 98/29-45/22-23

Date: 29.01.2024

Notice Inviting e-Tender No: 08/29-45/22-23/2023-24 (5th Call)

e-Tender for Construction of three storied food court and air-conditioned restaurant near aquarium at Zoological Garden, Alipore, Kolkata-700027

The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited invites e-tenders for the following work as detailed in the table below. Collection (downloading) and Submission (uploading) of Tender can be made online through the website <https://wbtenders.gov.in> only.

Name of Project	Estimated Amount Put to tender (Rs.)	EMD (Rs.)	Tender Fees (Rs.)	Period of Completion of the work	Defect Liability period
Construction of three storied food court and air-conditioned restaurant near aquarium at Zoological Garden, Alipore, Kolkata - 700 027.	8,71,97,868.00 for Part-A of the BOQ + Amount to be quoted by the bidder for Part-B of the BOQ	10,00,000.00	NIL	12 months (From the date of issue of work order)	5 years (From actual date of completion of work)

In the event of e-filling, intending bidder may download the tender documents from the website <https://wbtenders.gov.in> directly with the help of Digital signature Certificate.

a) Tenderer will select the tender to bid and initiate payment modes (vide Finance Department Memorandum no. 3975-F(Y) Dated 28/07/2016)

i) Net banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI Bank Payment gateway.

ii) RTGS/NEFT in case of offline payment through bank accounts in any bank.

b) Exemption of any kind for any of the eligible bidder towards cost of EMD will be according to

i. 815-F(Y) dated 23/02/2023 issued by Finance Department, Audit Branch, Government of West Bengal.

Schedule of Dates:

Sl. No.	Particulars	Date & Time
1	Date of uploading N.I.T. Documents—Online (Publishing Date)	30/01/2024 at 10.00 AM
2	Documents download start date (Online)	30/01/2024 at 10.00 AM
3	Pre-Bid Meeting with the intending Bidders. (Optional for the bidders)	02/02/2024 at 12.00 PM at 'Aranya Bikash', KB-19, Sector-III, Kolkata – 700106.
4	Documents download end date (Online)	27/02/2024 at 05.00 PM
5	Bid submission start date (Online)	06/02/2024 at 10.00 AM
6	Bid submission closing date (Online)	27/02/2024 at 05.00 PM
7	Bid opening date for Technical Proposal (Online)	29/02/2024 at 05.00 PM
8	Date of uploading technically qualified bidders (Online)	To be notified in due course
9	Date of opening Financial Bids (Online)	To be notified in due course

Note:

- 1) In case of any unscheduled holiday or on days of Bandh or natural calamity on the aforesaid dates, the next working day will be treated as scheduled / prescribed date for the same purpose.
- 2) The Tender Inviting Authority may change the venue of opening the Technical or Financial Bids in case of exigent circumstances like breakdown of communications link or conditions of force majeure.
- 3) The Tender Inviting Authority reserves the right to defer the date of opening of either Technical or Financial Proposal or both, if required.

INSTRUCTION TO BIDDERS (ITB)

Section – A

1. General Guidance for e-Tendering
 - 1.1 Instructions / Guidelines for tenderers for electronic submission of the tenders online have been shown in Web site <https://wbtenders.gov.in>
 - 1.2 Registration of Contractors
Any contractor willing to take part in the process of e-tendering will have to be enrolled and registered with the Government e-Procurement System.
 - 1.3 Digital Signature Certificate (DSC)
Each contractor is required to obtain a Class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders.
 - 1.4 Collection of Tender Documents
The contractor can search and download NIT and tender documents electronically from computer once he logs on to the website mentioned in Clause 1.1 using the Digital Signature Certificate. This is the only mode of collection of tender documents.
2. Submission of Tenders:
 - 2.1 General process of submission:
Tenders are to be submitted online through the website stated in Clause 1.1 in two folders, at a time for each work, one is Technical Proposal and the other is Financial Proposal, before the prescribed date and time mentioned in the list attached. Using the Digital Signature Certificate (DSC), the documents are to be uploaded, virus scanned and digitally signed. Tenderers should specially take note of all the addendum/corrigendum related to the tender and upload the latest documents as part of the tender.
 - 2.2 Technical Proposal
The Technical Proposal should contain scanned copies and/or a declaration in standardized formats of the following in two covers (folders).

A. Technical File (Statutory Cover) containing

- i. NOTICE INVITING TENDER (NIT) (to be submitted in “NIT” Folder).
- ii. Section B (Form I, Form II A, Form II B, Form II C, Form III and AFFIDAVIT – Y, AFFIDAVIT Z) (to be submitted in “FORMS” Folder).
- iii. Instructions to Bidders. (to be submitted in “ITB” Folder)
- iv. General Terms & Conditions of Contract. (to be submitted in “ GT AND CC” Folder)
- v. Technical Specification. (to be submitted in “ TS ” Folder)
- vi. Drawing if Any to (“DRAWING” Folder)

Note: Tender document may be downloaded from website & submission of Technical Bid/Financial Bid as per Tender Schedule

vii. Addenda/Corrigenda, if published: Contractors are to keep track of all the Addendum/Corrigendum issued with a particular tender and upload all the above, digitally signed, along with the NIT. Tenders submitted without the Addendum/Corrigendum will be treated as invalid and liable to be rejected.

B. My Document (Non-Statutory Cover)

Sl. No.	Category Name	Sub-Category Description	Document Name
			(For details see Clause 3 of ITB & relevant clauses of NIT)
A.	CERTIFICATES	CERTIFICATES	1 Up to date Professional Tax deposit receipt challan
			2 GST Registration Certificate for the state of West Bengal with valid HSN/SAC code tagged for respective similar nature of work.
			3 I.T.R. Acknowledgement Receipt (last 5years)
			4 I.T. PAN Card, ESI & EPF Registration Certificate (If EPF and ESI is not required by law, declaration is to be submitted on letter head of The Company/ Firm properly stamped and signed)
			5 Aadhar Card for individual bidder
			6 Enlistment Certificate/ Trade License for similar nature of work
			7 ESI and EPF up to date payment certificate
			8 All up-to-date documents regarding taxes and charges as applicable
B.	COMPANY DETAILS	COMPANY DETAILS	1 Proprietorship Firm - Trade Licence
			2 Partnership Firm - Registered Partnership Deed, Registered Power of Attorney, Trade Licence
			3 Pvt. Ltd. Company - Registration Certificate under Company's Act, MOA & AOA, Registered Power of Attorney, Trade Licence
			4 Registered Un-employed Engineers and Labour Co-operative Societies. Please refer to clause 3(f).

C.	CREDENTIAL	CREDENTIAL	1	<p>(i) Intending tenderers should produce credentials of a similar nature of completed work of the minimum value of Rs. 2,26,00,000.00 (two crore twenty six lakh) during 5(five) years prior to the date of issue of tender notice.</p> <p style="text-align: center;">or</p> <p>(ii) intending tenderers should produce credentials of the one single running work of similar nature which has been completed to the extent of 70% or more and value of which is not less than the desired value at (i) above;.</p> <p>In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the Concerned Executive Engineer or equivalent or Competent Authority will be eligible for the tender. In the required Certificate it should be clearly stated that the work is in progress satisfactorily and also that no penal action has been initiated against the executed agency, i.e., the tenderer</p>
				<p>Terms and conditions of credential:-</p> <ul style="list-style-type: none"> ➤ Payment certificate will not be treated as credential. ➤ Credential certificate issued by the Executive Engineer or equivalent or Competent Authority of a State/ Central Government, State/ Central Government undertakings, Statutory/ Autonomous bodies constituted under the Central/ State statute, on the executed value of completed/ running work will be taken as credential. ➤ No credential will be considered as valid unless it is supported by work order, price schedule or BOQ of work and completion certificate mentioning the date of completion issued by the competent authority not below the rank of Executive Engineer or equivalent or competent authority of a State / Central Government, State / Central Government undertakings, Statutory / Autonomous bodies constituted under the Central / State Statute. The completion certificate should indicate the value of the work (equal to booked expenditure). ➤ Estimated Amount, tendered amount, value of executed work, Date of Completion of project along with telephone number & detail address for communication of client must be indicated in the Credential Certificate. ➤ Credential for similar nature of work is referred to Credential for Composite Works which shall include Construction of G+2 or higher storey building and electrical works.
D.	EQUIPMENTS	PLANTS & MACHINERIES	1	Refer to Affidavit-Z
E.	FINANCIAL CAPABILITY		1	Last five years Audited Balance Sheet, P&L accounts duly certified by Chartered Accountant.

		Bid Capacity (Form-IIA)	2	The available Bid Capacity (to be calculated on the basis of prescribed format) of the prospective applicant at the expected time of bidding should be more than Rs.11,29,00,000.00 (Eleven crores and twenty nine lakh). In case of Proprietorship and Partnership Firms and Company the Tax Audited Report in 3CD Form to be furnished along with Balance Sheet and Profit and Loss Account and all schedules forming the part of Balance Sheet and Profit & Loss Account. Tax Audited Report, Balance Sheet and Profit & Loss Account including all schedules forming the part of Balance Sheet and Profit & Loss Account should be in favour of applicant.
		Liquid Assets (Form-IIB and IIC, as applicable)	3	Available Liquid Assets (aggregate of Working Capital Cash-in-Hand, Uncommitted Bank Guarantees) and/or credit facilities should not be less than 10% of Rs.11,29,00,000.00 (Eleven crores and twenty nine lakh). In this respect, the bidder must attach necessary documents with the application. The Bidder's Net Worth for the last year calculated on the basis of capital, profit and free reserve available to the firm should be positive. (Form-II B)
F.	Technical Personnel (Form-III)	Civil, Fire Fighting and FDA works	1	The prospective bidders shall have full time engaged/appointed experienced technical personnel, the minimum being one Civil Engineering Degree holder having minimum 5 years post qualification experience in building works and two Civil Engineering Diploma holder having minimum 3 years post qualification experience in building works (Authenticated documents in respect of Qualification and engagement shall be furnished for Technical-Evaluation). In this respect the bidder shall upload Form No.-III in Section-B duly notarized, failing which the bid may be treated as non-responsive.
		Electrical, HVAC works	2	The prospective bidders shall have full time engaged/appointed experienced technical personnel, the minimum being one Electrical Engineering Degree holder having minimum 5 years post qualification experience and one Electrical Engineering Diploma holder having minimum 3 years post qualification experience (Authenticated documents in respect of Qualification and engagement shall be furnished for Technical-Evaluation). In this respect the bidder shall upload Form No.-III in Section-B duly notarized, failing which the bid may be treated as non-responsive.
G	Affidavit		1	Name of technical staff is to be declared by an affidavit

2.3. Financial Proposal

i) The financial proposal should contain the Bill of Quantities (B.O.Q) in one cover (folder). BOQ consists of two parts Part A and Part-B.

Part-A is for scheduled item of works. The bidder is to quote the percentage rate indicating

- Excess in % or
- Less in % or
- Excess or Less 0.00% to indicate at par

in the space marked for quoting rate in the BOQ.

Part-B is for non-scheduled item of works. Bidders are required to quoted their best price against each item of work.

L-1 bidder will be the bidder whose summation of Part-A and Part-B will be less than other participants.

ii) Only downloaded copy of the B.O.Q. are to be uploaded quoting the rate, virus scanned & digitally signed by the contractor.

3. Eligibility Criteria for participation in tender:

(a) The bidder should have all necessary permission, registration and license as applicable. The bidder should have valid PAN, GSTIN Registration for the state of West Bengal with valid HSN/SAC code tagged for respective similar nature of work., ESI and EPF registrations ((If EPF and ESI is not required by law, declaration is to be submitted on letter head of The Company/ Firm properly stamped and signed), Professional Tax registration and Trade License with Government of West Bengal.

(b) All categories of prospective Tenderers shall have to submit valid and up to date Professional Tax receipt challan, GST registration certificate, Income Tax Return Acknowledgement receipt for last 5 years, Audited Balance Sheet and P & L Accounts duly certified by the Chartered Accountant for last 5 years, PAN card issued by Income Tax Department, Aadhar Card and Trade Licence for similar nature of work in respect of the prospective tenderer.

(c) Where an individual person holds a Certificate in his own name duly issued to him against the company or the firm of which he happens to be a director or partner, such individual person shall, while submitting any tender for and on behalf of such company or firm, invariably submit a copy of registered power of attorney showing clear authorization in his favour, by the rest of the directors of such company or the partners of such firm, to submit such tender. The Power of Attorney shall have to be registered in accordance with the provisions of the Registration Act, 1908. (Non-statutory Documents).

(d) Neither prospective Tenderer nor any of the constituent partners had been debarred to participate in any Tender by the State/ Central Government, State /Central Government undertaking, Statutory/ Autonomous bodies constituted under the Central/ State statute during the last 5 (five) years prior to the date of this NIT. Such debaring will be considered as disqualification towards eligibility. (A declaration in this respect has to be furnished by the prospective bidders as per prescribed format in non-judicial stamp paper, must be uploaded with both sides of Stamp Paper - Affidavit-Y). [Non-statutory Documents]

(e) The partnership firm shall furnish the Registered Partnership Deed and the Company shall furnish the Memorandum of Association (MOA) and Article of Association (AOA.) [Non-statutory Documents]

(f) Registered Un-employed Engineers' Co-operative Societies / Labour Co- operative Societies are required to furnish the following documents: - [Non-statutory Documents]

- i. Current "No Objection Certificate" from the Assistant Registrar of Co-operative Societies.
- ii. Supporting documents showing area of operation.
- iii. Bye-laws duly approved by the Assistant Registrar of Co-operative Societies.
- iv. Name with address and signature (in original) of the present Board of Directors of the Co-operative Society
- v. Copies of Minutes of last Annual General Meeting and Audit Report of the Co-operative Society with the evidence of submission of the same to the concerned Authorities, duly attested.

(g) The prospective Tenderers or any of their constituent partner shall neither have abandoned any work nor any of their contract have been rescinded during the last 5 (five) years. Such abandonment or rescission will be considered as disqualification towards eligibility. (Affidavit-Y)

(h) A prospective Tenderer shall be allowed to participate in the job as an individual (proprietorship firm) or as a partner of a firm or as registered company or as registered un-employed engineers and as labour co-operative societies. If the prospective Tenderer is found to have applied severally in a single job, all his applications will be rejected for that job. (Affidavit-Y)

(i) Conditional / Incomplete Tender will not be accepted under any circumstances.

(j) *Intending tenderers should produce credentials of a similar nature of completed work of the minimum value of Rs. 2,26,00,000.00 (two crore twenty six lakh) during 5(five) years prior to the date of issue of tender notice.*

or

intending tenderers should produce credentials of the one single running work of similar nature which has been completed to the extent of 70% or more and value of which is not less than the desired value at (i) above;

In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the Concerned Executive Engineer or equivalent or Competent Authority will be eligible for the tender. In the required Certificate it should be clearly stated that the work is in progress satisfactorily and also that no penal action has been initiated against the executed agency, i.e., the tenderer.

Terms and conditions of credential:-

- *Payment certificate will not be treated as credential.*
- *Credential certificate issued by the Executive Engineer or equivalent or Competent Authority of a State/ Central Government, State/ Central Government undertakings, Statutory/ Autonomous bodies constituted under the Central/ State statute, on the executed value of completed/ running work will be taken as credential.*
- *No credential will be considered as valid unless it is supported by work order, price schedule or BOQ of work and completion certificate mentioning the date of completion issued by the competent authority not below the rank of Executive Engineer or equivalent or competent authority of a State / Central Government, State / Central Government undertakings, Statutory / Autonomous bodies constituted under the Central / State Statute. The completion certificate should indicate the value of the work (equal to booked expenditure).*
- *Estimated Amount, tendered amount, value of executed work, Date of Completion of project along with telephone number & detail address for communication of client must be indicated in the Credential Certificate.*
- *Credential for similar nature of work is referred to Credential for Composite Works which shall include Construction of G+2 or higher storey building and electrical works.*

(k) Absence of any of these above mentioned details / lack of proof or lack of sufficient documents to substantiate the above shall make the Tenderer / Bidder ineligible for further consideration. During the process of evaluation, if the Tender Inviting Authority finds that there are any wrong details, mis-representation or false declarations given by the Tenderer / Bidder, the Tender Inviting Authority shall have the right to disqualify and / or black list the firm and take other action as deemed necessary.

(l) Tenderers has to produce duly self-attested supporting documents/certificate from the employer/client with whom they have worked. Audited Balance Sheet and P & L Accounts duly certified by the Chartered Accountant.

(m) The bid submission by an intending tenderer who is already blacklisted in any State/Central Government, State/ Central Government Undertaking, Statutory/ Autonomous bodies constituted under the Central/ State Statute will not be entertained.

(n) All the participants have to upload undertaking that they do not have any litigation that past or present with any Govt./PSU/Semi-Govt. Organisation of the State. (Affidavit-Y)

(o) The eligibility of a bidder will be ascertained on the basis of the attached documents uploaded using digital signature in support of the minimum criteria and the declaration executed through prescribed affidavit in non-judicial stamp paper (must be upload both sides of Stamp Paper) of appropriate value duly notarised. If any documents submitted by a bidder is either manufactured or false, in such cases, the eligibility of the bidder/tenderer will be out rightly rejected at any stage without any prejudice.

(p) No tenderer shall be deemed to be fit for consideration unless the tender documents are fully and completely filled in. All information that may be asked from the Tenderer must be unequivocally furnished. The eligibility of a Tenderer will be ascertained on the basis of the documents submitted by a Tenderer in support of eligibility criteria. If any document submitted by a Tenderer is found to be incomplete/incorrect/ manufactured / fabricated or false, his Tender will be out rightly rejected at any stage and legal action will be taken against him.

(q) Bidders shall be in similar business for more than 5 years.

(r) Joint ventures not allowed.

(s) Bidders are required to give detailed work programme in the form of a bar chart / work flow chart along with tender.

(t) All affidavits are required to be submitted with stamp paper both-side scanned. Without both-side scanned stamp paper participation of bidder will be disqualified during technical evaluation.

4. Opening of Technical Proposal: -

Technical proposals will be opened by the authorized representatives electronically from the website stated in Clause 2.1, using their Digital Signature Certificate.

Intending tenderers may remain present, if they so desire.

Cover (Folder) for Statutory Documents should be opened first, if found in order, Cover (Folder) for Non-statutory Documents will be opened. If there is any deficiency in the Documents, the tender will summarily be rejected.

Decrypted (transformed into readable formats) documents of the non-statutory Cover will be downloaded, and handed over to the Tender Evaluation Committee (constituted for evaluation of tenders).

5. Uploading of summary list of technically qualified tenderers :

Pursuant to scrutiny and decision of the Tender Evaluation Committee (TEC), the summary list of eligible tenderers with the serial number of work(s) for which their Financial Proposals will be considered will be uploaded in the web portals.

While evaluation, the Committee may summon the tenderers and seek clarification / information or additional documents or original hard copy of any of the documents already submitted and if these cannot be produced within the stipulated time frame, their proposals will be liable for rejection.

6. Final publication of summary list of technically qualified tenderers :

Date of opening of financial bid will to be intimated in the final summary list.

7. Opening and Evaluation of Financial Proposal :

Financial proposals of the tenderers declared technically eligible will be opened electronically from the web portal stated on the prescribed date.

The encrypted copies will be decrypted and the rates will be read out to the contractors remaining present at that time.

After evaluation of Financial Proposal, by the appropriate Authority of West Bengal Forest Development Corporation, may upload the final summary result containing inter-alia, name of contractors and the rates quoted by them against each work.

8. Procedures to be followed when less than three technically qualified tenderers participated in any tender:

Action will taken in accordance with Finance Department , Audit Branch, Group T, memo no. 2320-F(Y) dated 07/06/2022.

9. Acceptance of Tender (Technically eligible/qualified)

Lowest valid rate should normally be accepted. However, the Tender Accepting Authority does not bind himself to do so and reserves the right to reject any or all the tenders-

10. Grounds for Suspension and Debarment:

The procedure as laid down below shall govern the suspension/debarment of Contractors for offences or violations committed during competitive bidding and contract implementation under WBFDC Ltd..

- (1) Submission of eligibility requirements containing false information or falsified documents.
- (2) Submission of Bids that contain false information or falsified documents, or the concealment of such information in the Bids in order to influence the outcome of eligibility screening or any other stage of the bidding process.
- (3) Unauthorized use of one's name/digital signature certificate for the purpose of bidding process.
- (4) Any documented unsolicited attempt by a bidder unduly influencing the outcome of the bidding in his favour.
- (5) Refusal or failure to post a self-declaration to the effect of any previous debarment imposed by any other department of State Government and/or Central Government.
- (6) All other acts that tend to defeat the purpose of the competitive bidding such as lodging false complain about any Bidder, lodging false complain about any Officer duly authorized by the Department, restraining any interested bidder to participate in the bidding process, etc.
- (7) Whenever adverse reports related to adverse performance, misbehaviour, direct or indirect involvement in threatening, making false complaints etc. damaging the reputation of the department or any other type complaint considered fit by the competent authority of the department, are received from more than one Officer or on more than one occasion from individual Officer.
- (8) Refusal or failure to submit the required performance security / earnest money within the prescribed time without justifiable cause.
- (9) Failure in deployment of Technical Personnel, Engineers and/or Work Supervisor having requisite license / supervisor certificate of competency as specified in the contract.
- (10) Refusal to accept the work order after issuance of "Letter of Acceptance" or enter into contract with the WBFDC Ltd. without justifiable cause.
- (11) Failure of the Contractor, solely due solely to his fault or negligence, to mobilize and start work or performance within the specified period as mentioned in the "Letter of Acceptance", "Letter of Acceptance cum Work Order", "Work Order", "Notice to Proceed", "Award of Contract", etc.
- (12) Failure by the Contractor to fully and faithfully comply with its contractual obligations without valid cause, or failure by the Contractor to comply with any written lawful instruction of the Executing Authority (the Officer authorized by the WBFDC Ltd.) or its representative(s) for the implementation of the Contract.
- (13) For the execution of Contracts, poor performance by the Contractor of his services arising from his fault or negligence. Any of the following acts by the Contractor shall be construed as poor performance.
 - (i) Non deployment of competent technical personnel, competent Engineers and/or work supervisors;
 - (ii) Non-deployment of committed equipment, facilities, support staff and manpower;
 - (iii) Deviation from approved design resulting in defective works;
 - (v) Using materials which are inappropriate and substandard or inferior to acceptable standards;

(14) For the procurement of goods, unsatisfactory progress in the delivery of the goods by the manufacturer, supplier, or distributor arising from Contractor's fault or negligence and/or unsatisfactory or inferior quality of goods, vis-à-vis as laid down in the contract.

(15) Wilful or deliberate abandonment or non-performance of the project or Contract by the Contractor resulting in substantial breach thereof without lawful and/or just cause.

CATEGORY OF OFFENCE :-

(A) First degree of offence: 1 to 15 of the above Clause-10 to be considered as First degree of offence.

(B) Second degree of offence: Any one of the offences as mentioned under Clause-10 above, committed by a particular Bidder/Contractor on more than one occasion, be considered as Second degree of offence.

In addition to the penalty of suspension/debarment, the bid security / earnest money / security deposit submitted by the concerned Bidder or prospective Bidder shall also be forfeited.

PENALTY FOR OFFENCE :-

(I) For committing First degree of offence: Disqualifying a Bidder from participating in any assignment process under West Bengal Forest Development Corporation Limited up to 2 (two) years.

(II) For committing Second degree of offence: Disqualifying a Bidder from participating in any assignment process under the West Bengal Forest Development Corporation Limited up to 3 (three) years.

11. Earnest Money Deposit (EMD):

a) Earnest Money payment:

- i. Net banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI Bank Payment gateway.
- ii. RTGS/NEFT in case of offline payment through bank accounts in any bank.

b) Exemption of any kind for any of the eligible bidder towards cost of EMD will be according to

- i. 815-F(Y) dated 23/02/2023 issued by Finance Department, Audit Branch, Government of West Bengal.

c) Refund of EMD: The EMD of the unsuccessful Tenderer will be refunded as per notification issued by Finance Department, Government of West Bengal, Memo no. 3975-F(Y) dated 28/07/2016.

d) Intending Tenderers should download the Tender Documents from the website <http://wbtenders.gov.in> directly with the help of Digital Signature Certificate.

e) Both Technical Bid and Financial Bid should be submitted duly digitally signed by the Tenderer through the website <http://wbtenders.gov.in> as per the 'Date & Time Schedule' stated in this N.I.T. (Details of which has been narrated in 'Instruction to Bidders')

12. Opening of Tender:

- (a) The Technical Bid shall be publicly opened by the authority receiving tender or by his authorized representative, as per the Date & time Schedule mentioned in NIT.
- (b) Bid evaluation will be guided by the latest financial rules and guidelines of Government of West Bengal.
- (c) Prospective Tenderers or their authorized representatives may be present during the opening process.
- (d) Financial Bids of only those tenderers who would qualify in the Technical Bid evaluation will be opened.
- (e) The intending Tenderers shall clearly understand that whatever may be the outcome of the present Invitation of Tender, no cost of Tendering shall be reimbursable by the WBFDC Ltd.. The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited reserves the right to reject any tender or all Tenders without assigning any reason whatsoever and is not liable for any cost that might have incurred by any Tenderer at any stage of Tendering.
- (f) The acceptance of the tender rests with The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited who does not bind himself to accept the lowest tender and reserves to himself the authority to reject any or all the tenders received without assigning any reason thereof.
- (g) The Contractor/Bidder should see the site of works and Tender Documents, Drawings etc. before submitting e-Tender and satisfy himself/herself regarding the condition and nature of works and ascertain difficulties that might be encountered in executing the work, carrying materials to the site of work, availability of drinking water and other human requirements & security etc.

13. The selected Contractor must arrange to procure all materials required for the proper completion of the work (as per the Technical Specifications of the tender document). The Employer will not on any account be responsible for procuring the same.

14. The selected contractor shall apply to The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited for seeking permission for utilization of land at the close proximity of the site for arranging required (if any) plant & machineries, store of materials, labour shed, laboratory etc. at his own cost and responsibility. All such temporary shed etc. shall have to be dismantled and all debris etc. cleared from site post completion of the work or as directed by The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited. Once an order to the effect is issued from The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited in this regard, it shall be brought to effect by the contractor without contest.

15. Validity of Bids:

Generally, Bids will be valid for 120 days from the date of opening of the financial proposal. However, extension of bid validity may be suitably considered by the Tender Inviting Authority, if required, subject to obtaining a written confirmation of the contractor/bidder(s) to that effect. Withdrawal of e-Tender once the bid has been submitted online and after passing of end date for submission which has been accepted for further processing is not allowed. EMD will be forfeited by WBFDC Ltd. and the bidder/contractor shall be penalized in terms of provisions in the notice of the tender (Sl. 10 of ITB).

16. Verification of credentials:

Before issuance of the work order, the Tender Accepting Authority may verify the credential and other documents of the lowest Tenderer if found necessary. After verification, if it is found that such documents submitted by the lowest Tenderer is either manufactured or false in that case, work order will not be issued in favour of the Tenderer under any circumstances and legal action will be taken against him.

17. Cancellation of Tender :

The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited reserves the right to cancel this N.I.T. due to unavoidable circumstances and no claim in this respect will be entertained.

18. Security Deposit:

While making any payment to the contractor whose tender has been accepted for work done under the contract, the authority making payment shall deduct such sum which together with the Earnest Money already deposited and converted into security deposit, shall amount to 10% of the value of works executed at the material point of time and paid during the progressive running accounts bills, so that total deduction together with Earnest Money constitute 10% of the tendered value of work actually done.

In case of excess/and supplementary work over the tendered amount, additional security @ of 10% of such additional amount is to be deposited for all such excess/ and supplementary works beyond the tendered amount before payment of final bill.

Compensation of all other sums of money payable by the contractor to the WBFDC Ltd. under the terms of the contract may be deducted from the security deposit.

However, even though the earnest money deposited exceeds the prescribed percentage i.e., 10%, due to reduction of tendered amount due to any reason whatsoever, such additional earnest money shall be deemed to have been converted into security and further deductions from progressive bills shall be made, taking into consideration the enhanced component of earnest money so converted into security.

Additional Performance Security @ 10% of the tendered amount in the form of Bank Guarantee from a Scheduled Bank, valid up to the date of completion of work, shall be obtained from the successful bidder, if the accepted bid value is 80% or less than the estimated amount put to tender.

If the bidder fails to submit Additional Performance Security within 7 (seven) working days from the date of LoA or the time period as approved by the Tender inviting Authority, his Earnest Money will be forfeited.

If the bidder fails to complete the works successfully, the Additional Performance Security along with Security Deposit lying with the WBFDC Ltd. shall be forfeited at any time during the pendency of contract period as per relevant Clauses of the Contract.

Necessary provisions regarding deductions of Security Deposit from the progressive bills of the Contractor as per relevant clauses of the contract will in no way be affected/ altered by this Additional Performance Security.

19. Technical Specification and Quality of Works (To be read in conjunction with “Specification of Works”):

Unless otherwise stipulated, all the works are to be done as per the Technical Specifications of the tender document. Contractor may refer to the relevant PWD (W.B.) Schedule of Rates for the working area including up to date addenda and corrigenda, if any, published by Public Works Department, Government of West Bengal.

20. Deduction of Taxes Etc:

Deduction of Income Tax & other taxes from the Contractors Bill will be made as per existing govt. rules.

21. Removal of Discrepancy:

If any discrepancy arises between two similar clauses on different notification, the clause as stated in later notification will supersede former one in following sequence:-

- a. Form of Agreement
- b. Relevant PWD(W.B.) Schedule of Rates.
- c. Technical bid
- d. Financial Bid
- e. This NIeT

22. MOBILISATION ADVANCE:

No Mobilisation Advance and Secured Advance will be allowed.

23. Canvassing in connection with the tender is strictly prohibited.

24. Site of work and necessary drawings may be handed over to the successful Tenderer along with the work order or in a phase wise manner as deemed fit by The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited. No claim in this regard will be entertained.

25. The successful Tenderer will have to start the work as per the work order to commence the work.

26. The contractor shall not be entitled for any compensation for any loss suffered by him due to delay arising out for modification of the work, due to non-delivery of the possession of site and / or modification of work etc.

27. Prevailing safety norms has to be followed by the successful Tenderer during execution of the work so that LTI (Loss of time due to injury) is zero.

28. A Tenderer is to quote in figures as well as in words, his rates in the BOQ as applicable in his cases.

29. In the event of a tender being submitted by a prospective bidder, it must be signed by a Proprietor / Partner / Director / Member / Employee of the Firm / Company / Labour Co-operative Society / Registered Unemployed Engineers Society, having legal authority to do so in form of registered power of attorney showing clear authorization in his favour, by the rest of the Directors / Partners / Members of such firm / company / Labour Co-operative Society / Registered Unemployed Engineers Society, to submit such tender. The Power of Attorney shall have to be registered in accordance with the provisions of the Registration Act, 1908 and if called for, legal documentations in support thereon must be produced for inspection.

30. The Tenderer must sign at the bottom of each page of the tender documents as a proof of acceptance of terms and conditions of the Tender. Overwriting shall not be allowed. All corrections, alternations etc. must be duly signed.

31. Mismatch in Name

All documents uploaded by the Bidder in support of his eligibility/credential for Pre-qualification to participate in this NIeT should be same and identical & with Digital signature certificate (DSC). Minor mismatch like "M/S", "Kr/Kumar", "Co-Op/Co-Operative" etc. has to be legalised/authenticated by the Bidder by uploading of proper Affidavit (duly Notarized) in this regard.

32. It must be clearly understood that the quantities of the various items indicated in the schedule or probable items are approximate only and may be appreciably increased or decreased during actual execution.

33. The successful tenderer shall have to comply with the provision of the Minimum Wages Act, 1948 (d) and the subsequent amendments thereof.

34. Work order will be issued subject to availability of fund, administrative approval and financial sanction from the competent authority.

35. Price Adjustment / Price Preference: -Adjustment of Price (increase or decrease) shall not be applicable. The bidders shall quote their rate accordingly considering that no escalation and / or price adjustment will be allowed by the WBFDC Ltd. thereto under any circumstances.

No Price Preference will be allowed for the work under this NIE T.

Divisional Manager,
Kolkata Forest Corporation Division
West Bengal Forest Development Corp. Ltd.

Memo No. 98/29-45/22-23

Date: 29.01.2024

Copy forwarded for kind information to: -

- 1) The Managing Director, West Bengal Forest Development Corp. Ltd.
- 2) The General Manager, (HQ), West Bengal Forest Development Corp. Ltd.
- 3) Member Secretary, West Bengal, Zoo Authority
- 4) Director, Alipore Zoo, Kolkata
- 5) Chief Conservator of Forests, MIS. For uploading in departmental website 'www.westbengalforest.gov.in'
- 6) The Guard File
- 7) Notice Board

Divisional Manager,
Kolkata Forest Corporation Division
West Bengal Forest Development Corp. Ltd.

Section – B
FORM-I
APPLICATION

To,
Divisional Manager,
Kolkata Forest Corporation Division
West Bengal Forest Development Corp. Ltd.

Subject: Name of the Work with Tender reference no. _____.

Reference: (N.I.T No.)_____

Dear Sir / Madam,

Having examined the Statutory, Non-statutory and NIT documents; I/We hereby submit all the necessary information and relevant documents for evaluation.

The necessary evidence admissible by law in respect of authority assigned to us on behalf of the group of firms for application and for completion of the contract documents is attached herewith.

I/We are interested in bidding for the work mentioned above.

I/We understand that

- (a) Tender Inviting Authority and Accepting Authority can amend the scope and value of the contract bid under this project
- (b) Tender Inviting Authority and Accepting Authority reserve the right to reject any tender without assigning any reason.

The application is made by me/us on behalf of _____ in the capacity of _____ duly authorized to submit the tender.

Enclosure:

- (1) Technical Proposal (Envelop-1/Folder)
- (2) Financial Proposal (Envelop-2/Folder)

Date: _____

Authorized signatory of the firm/company: _____

Title & Capacity of the officer: _____

Name of the Firm with Seal: _____

SECTION – B

FORM – II A
(Reference – 2.2.B.E of ITB of this NIEI)

Financial Statement

Information of audited financial statement for the last year to demonstrate the current soundness of the Bidder's financial position

Name of Bidder: _____

1. The Bidder's Net Worth for the last year calculated as the difference between total assets and total liabilities should be positive.

2. Bidders, who meet the minimum qualification criteria, will be qualified only if their available bid capacity at the expected time of bidding is more than Rs.11,29,00,000.00 (Eleven crores and twenty nine lakh). The available bid capacity will be calculated as under:

Assessed Available Bid Capacity = [A x N x 2 – B]

= Rs.

= Rs.

Where,

A = Maximum value of engineering works in respect of projects executed in any one year during the last 5 (five) years (updated to the price level of the year indicated in table below under note) taking into account the completed as-well-as works in progress. The projects include turnkey project / item rate contract / construction works.

N = Number of years (i.e.year) prescribed for completion of the works for which Bids are invited.

B = Financial Liability of the bidder to be incurred for existing commitments and on-going works during the period of the subject contract.

To calculate the value of “A”

(i) A table containing value of engineering works in respect of projects (turnkey project / item rate contract / construction works) undertaken by the Bidder during last 5 (five) years is as follows:

Sl. No.	Year	Value of engineering works undertaken w.r.t. projects (Rs. in Crores)
1	Year-5(2018-2019)	
2	Year-4(2019-2020)	
3	Year-3(2020-2021)	
4	Year-2(2021-2022)	
5	Year-1 (2022-2023)	

(ii) Maximum value of projects that have been undertaken during the F.Y. out of the last 5 (five) years and value is Rs. Crores (Rupees) only. Further, value updated to the price level of the year indicated in Table is as follows:

Rs.Crores X (upadation factor as per Table annexed)

= Rs.Crores (Rupees) only

Table indicating the factor for the year for upadation to the price level is indicated as under

Sl. No.	F.Y./Calendar Year	Updation factor
1	Year-1 (2022-2023)	1.00
2	Year-2(2021-2022)	1.05
3	Year-3(2020-2021)	1.10
4	Year-4(2019-2020)	1.15
5	Year-5(2018-2019)	1.20

(iii) Net worth for the last year (i.e., F.Y. 2022-2023) of
.....(name of the company) is Rs.
..... (Rupees) only.

..... Signature, name and designation of Authorised Signatory For and on/belief of(Name of Applicant)

..... Name of the Statutory Auditor's Firm Seal of the audit firm: (Signature, name and designation and Membership No. of authorised signatory)
--

N.B.: This form (i.e. Form-II A) must be made in the letter head of the Auditor's Firm / Chartered Accountant Firm, clearly mentioning the address and contact number of the firm & Date of Registration of the Chartered Accountant issuing the Certificate.

To calculate the value of “B”

3. A table containing value of all the existing commitments and on-going works to be completed during the next years (prescribed time for completion of the works for which Bids are invited) is as follows:

Sl. No.	Name of Work/ Project	Name of Employer	Percentage of participation of bidder in the project	Stipulated period of completion as per Agreement / LOA with the start date	Value of Contract as Agreement / LOA (Rs.)	Value of work completed (Rs.)	Balance value of work to be completed (Rs.)	Anticipated date of completion	Financial Liability to incurred for the said work / project during the period of the subject contract (Rs.)
1	2	3	4	5	6	7	8	9	10

.....

 Signature, name and designation of
 Authorised Signatory

For and on/belief of
(Name of Applicant)

N.B.: This form (i.e. Form-II A) must be made in the letter head of the Auditor’s Firm / Chartered Accountant Firm, clearly mentioning the address and contact number of the firm & Date of Registration of the Chartered Accountant issuing the Certificate.

SECTION – B

FORM – II B

(Reference – 2.2.B.E of ITB of this NIeT)

This is to certify that we have verified the consolidated financial statement of
(Name of the Firm in which application is made) having its Registered Office at of
(address of the Firm).

Based on our examination of Books and Records and other documentary evidences we certify that the financial data of the company given in the balance sheets are detailed hereunder for the Financial year(s) as mentioned below are true and correct.

Sl. No.	Description	Financial Data for the last 5 audited Financial Years				
		2022-2023	2021-2022	2020-2021	2019-2020	2018-2019
1	Net Worth (Calculated on the basis of capital, profit and free reserve available to the firm should be positive)					
2	Working Capital					
3	Annual Turnover (Civil Construction Work)					

Available Liquid Assets:

1. Working Capital = Rs.
2. Uncommitted Bank Guarantees = Rs.
3. Credit facilities = Rs.

Total Liquid Assets = Rs.

<p>..... Signature, name and designation of Authorised Signatory</p> <p>For and on/belief of(Name of Applicant)</p>

<p>..... Name of the Statutory Auditor's Firm</p> <p>Seal of the audit firm: (Signature, name and designation and Membership No. of authorised signatory)</p>

N.B.: This form (i.e. Form-II B) must be made in the letter head of the Auditor's Firm / Chartered Accountant Firm, clearly mentioning the address and contact number of the firm & Date of Registration of the Chartered Accountant issuing the Certificate.

SECTION – B

FORM – II C

(Reference – 2.2.B.E of ITB of this NIEt)

(Format for Credit Facility issued by the bank which is authorised to conduct Government business in West Bengal by Reserve Bank of India as notified by State Government from time-to-time and any other Bank which has been authorised by the State Government.)

Certified that we hereby undertake to declare that a **Credit Facility** of Rs. shall be provided to the agency (name of agency) for the execution of the work
..... (name of work) vide NIEt No. of the
Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited if awarded by the competent authority.

.....
Signature of the Bank Authority

.....
Counter Signed by the intending Bidder

.....
Designation

.....
Code No.

Section – B
FORM – III
(Reference – 2.2.B.F of ITB of this NIEI)
STRUCTURE AND ORGANISATION

A.1. Name of the applicant (Tenderer):

A.2. Office Address:

Telephone No.:

Fax No.:

e-mail :

A.3. Name and address of Bankers:

A.4. Attach an organization chart showing the structure of the company with names of key personnel and technical staff with Bio-data

Date: _____

Authorized signatory of the Firm/Company: _____

Title & Capacity of the officer: _____

Name of the Firm with Seal: _____

Note: Application covers Proprietary Firm, Partnership Firm, Pvt. Ltd. Company or Corporation, Registered Un-employed Engineers' Co-operative Societies / Labour Co- operative Societies

Section-B

AFFIDAVIT – Y

(To be furnished in Non-judicial stamp paper of appropriate value duly notarized)

- (I) I, the undersigned do certify that all the statements made in the attached documents are true and correct. In case of any information submitted, proved to be false or concealed, the application may be rejected and no objection/claim will be raised by the undersigned.
- (II) The undersigned also hereby certifies that neither our Firm/ Company_____ nor any of constituent partners had been debarred to participate in tender by State/ Central Government, State /Central Government undertaking, Statutory/ Autonomous bodies constituted under the Central/ State statute in favour of whom credentials are preferred by the undersigned towards eligibility criteria claim; during the last 5 (five) years prior to the date of publication of this N.I.T. (Clause 3.d. of ITB of this NIeT)
- (III) The undersigned would authorize and request any Bank, person, Firm, Government Department or Corporation to furnish pertinent information as deemed necessary and/or as requested by The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited herein referred to as the Tender Inviting & Accepting Authority, to verify this statement.
- (IV) The undersigned understands that further qualifying information may be requested and agrees to furnish any such information at the request of the Tender Inviting & Accepting Authority. (Clause 5 of ITB of this NIeT)
- (V) Certified that I have applied in the tender in the capacity of individual (proprietorship firm) / as partner of a firm / Registered Company / Registered Un-employed Engineers' / Registered Co-operative Societies or Labour Co-operative Societies & I have not applied severally for the same job (Clause 3.h. of ITB of this NIeT)
- (VI) I do not have any litigation in past or present with any Govt./PSU/Semi-Govt. Organisation of State/ Central Government. (Clause 3.n. of ITB of this NIeT)
- (VII) I or any of my constituent partner shall neither have abandoned any work nor any of our contract have been rescinded during the last 5 (five) years from the date of publication of this NIT. Such abandonment or rescission will be considered as disqualification towards eligibility. (Clause 3.g. of ITB of this NIeT)

Date:_____

Authorized signatory of the Firm/Company:_____

Title & Capacity of the officer:_____

Name of the Firm with Seal:_____

Section-B

AFFIDAVIT “Z”

(Reference – 2.2.B.D of ITB of this NIT)

(To be submitted in non-judicial stamp paper of appropriate value, duly notarized)

- I. I, the undersigned, declare that all the statements made in the attached documents in respect of mode of ownership of machineries are true and correct.
- II. Certified that minimum required specified machineries for the works as mention in the table below will be installed at the working site within 45 (*forty-five*) days (maximum) from the date of LOA / work Order.

Sl. No.	Machineries Requirement	Number	Mode of ownership (owned / lease rent)	Capacity
1	Tilting drum mixer diesel or electric operated with automatic water measuring system and integral weigher (Hydraulic/ Pneumatic type) with hopper	1		230-280 litres
2	Concrete Pump	1		As per requirement
3	Dewatering Pump	1		5 HP
4	Grout Pump	1		-
5	Form vibrator	4		-
6	Internal / immersion vibrator	4		-
7	Surface/ Screed vibrator	2		-
8	Hoist (Passenger/Material)	1		-
9	Cradle	1		-
10	Steel reinforcement cutting and bending machine	4		-
11	Welding machine	1		-
12	Steel shuttering material	400 sqm		-
13	Frame scaffold (tube/fitting etc.)			-
14	Floor grinding machine	4		-
15	Sand blasting machine	1		-
16	Telescopic steel prop with adjustable span			-
17	Potable cutter	3		-
18	DMC Piling Rig	6		-
19	Soil excavator cum loader	1		-
20	Transit Mixer	2		-
21	Tripper Truck	2		-
22	Generator	1		-
23.A.	Lab equipment	1 set		-
i	Balances			-
	7 kg to 10 kg capacity semi-self-indicating type – accuracy 10gm			-
	500 gm capacity semi-self-indicating type – accuracy 1gm			-
	Pan balance- 5 kg capacity – accuracy 10gm			-
ii	Ovens – electrically operated, thermostatically controlled up to 110°C-sensitivity 1°C			-
iii	Sieves as per IS 460-1962			-
	IS sieves – 450mm internal diameter of sizes 100 mm, 80 mm, 63 mm, 50 mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm, complete with lid and pan			-
	IS sieves – 200mm internal diameter (brass frame), consisting of 2.36mm, 1.18mm, 600 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan			-
iv	Sieve shaker capable of 200 mm and 300 mm diameter sieves, manually operated with timing switch assembly			-

v	Equipment for slump test			-
vi	Dial gauges, 25mm travel – 0.01mm/division least count	2		-
vii	100 tonnes compression testing machine, electrical – cum manually operated.			-
viii	Graduated measuring cylinders 200 ml capacity	3		-
ix	Enamel tray			-
	300mm x 250 mm	2		-
	Circular plates of 250mm diameter	4		-
x	Cube mould	12		-
xi	Others as per requirements			-
B.	Field testing instrument			-
i	Steel tape			3m
ii	Vernier callipers			-
iii	Micrometre screw 25mm gauge			-
iv	A good quality plumb bob			-
v	Spirit Level, minimum 30 cms long with 3 bubbles for horizontal, vertical			-
vi	Wire gauge (Circular type) disc			-
vii	Foot rule			-
viii	Long nylon thread			-
ix	Rebound hammer for testing concrete			-
x	Dynamic penetrometer			-
xi	Magnifying glass			-
xii	Screw driver 30 cms long			-
xiii	Ball pin hammer			-
xiv	Plastic bags for taking samples			-
xv	Moisture meter for timber			-
xvi	Others as per requirements			-
24	Survey equipment (Theodolite, Level Instruments)	1 set		-
25	Total station	1 set		-

- For Concrete Mixer, DMC Piling Rig, Concrete Pump maximum age of machineries will be 5 years as on the date of publication of NIEt. It may be extended up to 7 years after getting fit certificate from the manufacturer and his certificate will be produced at the time of submission of bid. Maximum age of all other machineries and equipment will be 8 years as on date of the publication of NIEt subject to the condition that all are in running condition.
- I will be to bound to deploy other requisite machinery and equipment during execution of the work at site as per direction of the Divisional Manager, Kolkata Forest Corporation Division. I understand that, if I fail to deploy any machinery or equipment during execution of work; penal action will be initiated against me as per the provision of this NIEt.

- III. Certified that I have access to or have available liquid assets (aggregate of working capital, Cash-in-Hand, uncommitted Bank Guarantees) and / or credit facilities not less than 10% of the estimated cost put to tender. In this respect, I have attached necessary documents with this application.
- IV. I, the under-signed, do certify that all the statements made in the attached documents are true and correct. If any declaration submitted is found / ascertain to be incorrect / fabricated / misrepresented / fraudulent etc., accordingly tender will be liable to be cancelled / terminated immediately & I / my firm / company shall also be liable to be prosecuted under section 197, 199 & 200 of Indian Penal Code, 1860 along with section- 71 & section -73 of Indian Information & Technology Act 2008 & any other applicable law for the time being in force in addition to forfeiture of Earnest Money / Security Deposit.

Date:

Signature, name and designation of Authorised Signatory for and on behalf of

(Name of the Applicant/Firm with Seal)

GENERAL TERMS & CONDITIONS OF CONTRACT

1. Drawing / Map:

The work is to be carried out in accordance with drawings / maps (if any) related to these contract and specification, the priced schedule of probable items with approximate quantities and directions or instructions which may be issued by the Employer or his Representative from time to time during the execution of the contract.

2. Interpretations:

In constructing these conditions, the specifications, the schedule of quantities, tender and Agreement, the following words shall have the meaning herein assigned to them except where the subject of context otherwise requires:

- (I) The term EMPLOYER/AUTHORITY shall mean The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited, and include its successor and assigns or the Officers authorized to deal with any matters which those presents are concerned on its behalf.
- (II) The term REPRESENTATIVE shall mean Authorized Official of The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited.
- (III) CONTRACTOR shall mean the firm or company or person whose tender has been accepted by the employer and includes his (their) heirs, legal representative assigns and successors.
- (IV) SITE shall mean the site of the contract work including any erections thereof and any other land adjoining thereto (inclusively as aforesaid allotted by the Employer for the contractor's use).
- (V) This CONTRACT shall mean Articles of Agreement, these conditions, the schedule of quantities, the general instructions to the Contractor, the specifications, the drawings / maps and correspondences by which the contract is added, amended, valued of modified in any way by mutual consent.
- (VI) ACT OF INSOLVENCY shall mean any act of insolvency as desired by the Presidency Towns Insolvency Act or the Provincial Insolvency Act or any amending statutes.
- (VII) THE WORKS shall mean the work or works to be executed or done under this contract.
- (VIII) The DRAWINGS / MAPS shall mean the drawing/map or drawings/maps mentioned in NIT and any modifications of them approved by the Employer or any further Working drawings/maps or sketches provided by the Employer or any further working drawings/maps or sketches which may be furnished or approved in writing by the Employer.
- (IX) The SPECIFICATION shall include the general specifications forming part of this contract.
- (X) The SCHEDULE OF QUANTITIES, BILL OF QUANTITIES shall mean the Schedule or Quantities as specified and forming part of contract.
- (XI) The PRICED SCHEDULE OR QUANTITIES shall mean the schedule duly priced.
- (XII) NOTICE IN WRITING or WRITTEN NOTICE shall mean a notice in writing typed or printed characters sent (unless delivered personally) or otherwise proved to have been received by Registered Post to the last known private or business address as registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered. If the employer feels that the contractor (who has signed the agreement) should himself come & personally meet to the employer for necessary discussion in connection with the work; he must contact personally. In case the contractor (not his authorized person) does not meet personally and intentionally avoids or do not reply the letter, the matter will fall under the breach of the contract. The work progress should be in the proportionate of the time frame set forth for the completion of the works.
- (XIII) The term APPROVED, DIRECTED or SELECTED mean the approval direction or selection of the Employer and where ever the words ALLOW, INCLUDE, and PROVIDE occurs the cost of the items is as the risk of the contractor. COMPLETION shall mean that the plantation in the opinion of the Tender Inviting Authority; completed in all respect.
- (XIV) WORDS imputing persons include Firms and Corporation, words imputing the singular only also the plural and vice/versa where the context so requires.

3. Scope of works:

Scope of work/supply includes providing all materials, labour, tools, machinery and equipment and management necessary for and incidental to the completion of the work. Mechanisation as approved by the Employer is preferred. All work during its progress and upon completion shall conform to the drawings furnished by the employer. Should any details essential for efficient completion of the work be omitted from the drawings/maps and specifications it shall be the responsibility of the Contractor to inform the Employer and to furnish and install such details with their concurrence, so that upon completion of the proposed work the same will be acceptable and ready for use. The Tenderers are to note that the scope of work as mentioned may be reduced to any extent which is absolutely at the discretion of the Employer. This reduction of the extent of work should not be a criterion for extra claim in respect of materials stored, establishment and cost incurred or any other losses occurring

out of these causes. The Contractor shall carry out and complete the works in every respect in accordance with this contract and in accordance with the directions and to the satisfaction of Employer who shall be the final authority. The Employer may in their absolute discretion issue further area drawings/maps and /or written instructions, details, direction and explanations which are hereafter collectively referred to as the Employer's instructions in regard to:

- a) The variation or modification of the design, quality or quantity of works or the addition or omission or substitution of any work.
- b) Any discrepancy in the drawings/maps or between the schedule of Quantities and /or Drawings/Maps and/or Specifications.
- c) The removal from the site of any materials brought thereon by the Contractor and the substitution of any other materials thereof.
- d) The demolition, removal and/or re-execution of any work executed by the Contractor.
- e) The dismissal from the work of any person employed thereupon.
- f) The opening up for inspection of any work covered up.
- g) The rectification and making goods of any defects under Clause hereinafter and those arising during the maintenance period (retention period).

The Contractor shall forthwith comply with and duly execute any work comprised in such Employer's instructions provided always that verbal instructions, directions and explanations given to the Contractor or his representative upon the works by the Employer shall, if involving a variation, be confirmed in writing by the contractor within seven days. No work, for which rates are not specifically mentioned in the priced schedule of quantities, shall be taken up without written permission of the Employer. Rates of items not mentioned in the Priced Schedule of Quantities shall be fixed by the Employer, as provided in Clause VARIATION. If complete with the Employer's instructions as aforesaid involves work and/or loss beyond that contemplated by the Contract then, unless the same were issued owing to some breach of this contract by The Contractor, the Employer shall pay to the Contractor the price of the said work as extra to be valued as hereinafter provided and /or loss.

4. Variations:

The Contractor may when authorized and shall when directed, in writing by the Employer or one or more representative of Employer whom the Employer may for that purpose appoint, shall be bound to add or omit from or vary the works shown upon the Drawings/Maps or described in specification or included in the Schedule of Quantities but the Contractor shall make no addition, omission or variation without such authorization or direction. A verbal authority or direction by the Employer, if confirmed by the Contractor in writing within seven days, be deemed to have been given in writing.

No claim for an extra shall be allowed unless it shall have been executed by the Contractor on specific direction on the Authority of Employer as herein mentioned any variation i.e. additions, omissions or substitutions shall vitiate the Contract. The rates of items not included in the Schedule or Quantities shall be settled by the Employer in accordance with the following rules:

- (a) For the rates for the additional, altered or substituted work for items mentioned in the tender, the tender at quoted rates will be applicable.
- (b) For the rates for the additional, altered or substituted work for items not mentioned in the tender, the Contractor shall, within 7days of the date of receipt of the order to carry out the work, inform the Employer of the rates which it is his intention to charge for such class of work, supported by required documents, vouchers etc. and analysis of rates claimed and the Employer shall determine the rates on the basis of the prevalent market rates and certify for the payment accordingly. The analysis shall be prepared on the basis of actual cost of materials and labour plus 10 (ten) per-cent to cover overhead supervision and profit etc. However, the Employer, by notice in writing, will be at liberty to cancel their order to carry out such work and arrange to carry out as they may consider advisable. But under no circumstances, the Contractor shall suspend the work on the plea of non-settlement of the rates of item falling under this clause.
- (c) Where extra work cannot be properly measured or valued, the Contractor shall be allowed day work price as the net rates stated in the Tender or the schedule of quantities, if not so stated, then in accordance with local day work rates and wages for the district provided that in either case vouchers specifying the daily time (and if required by the Employer the workman's names) and materials used be delivered for verification to the Employer at or before the end of the work following that in which the work has been executed.
- (d) As regards determination of the rates, the decision of the Employer shall be accepted as final. No supplementary items shall be taken up for execution except with prior written approval of the employer. The Employer is not bound to recognize the cost of materials furnished in vouchers and in case the market value of such materials, found to be lower than the depicted in the vouchers the Employer at their discretion will fix the price of such materials based upon market value. The contractor may be asked to produce original bills and /or Cash Memos in respect of purchases of such materials from market. Bills and Cash Memos in this regard shall not be entertained unless purchases are affected from registered regular merchants engaged in the trade of such items.

5. Deviations:

No deviation from the contract will on any account be allowed unless an order in writing is obtained from the Employer.

6. Site Conditions:

The contractor shall inspect the work site where the work under this contract are to be carried out, and note carefully the area restrictions and obtain for themselves at their own responsibility all the information which may be necessary for the purpose of the successful execution of the contracted work. They must also make themselves conversant with all the local conditions, means of access to the site of work, transport facilities and character of the work, the supply of materials, conditions affecting labour and other matter that may affect their tender. Employer does not undertake any responsibility, to obtain any concessions, permission from the owner of the adjoining plot or from other party in respect of any allowance, access, encroachments etc. whether for the facility of the works or otherwise. No claim therefore will be entertained should be Contractors have failed to comply with this condition. All equipment required to be maintained are to be kept free from damages due to operation connection with the work. The site shall be made available to the Contractors in the present condition. Site organization within this site boundary shall be the responsibility of the Contractors.

7. Persons Tendering shall visit SITE Etc.

Persons tendering shall visit the site and make themselves thoroughly acquainted with the Nature and requirements of the case, facilities of transport, conditions affecting labour and materials and removal of rubbish, cost of carriage freight and other charges and shall allow for in their tenders for any special difficulty in carrying out the work.

8. Contractor to provide everything necessary:

The Contractor shall provide everything necessary (all inclusive and fixed rates for the proper execution of the work according to the intent and meaning of the drawings/maps, schedule of probable items with approximate quantities, specifications taken together whether the same may or may not be particularly shown or described there in provided that the same can reasonably be inferred therefore and if the Contractor finds any discrepancy therein, he will immediately refer the case in writing to the Employer whose decision shall be final and binding on the parties. Figures dimensions shall be followed in preference to scale. The Employer shall on no account be responsible for the expense incurred by the Contractor for hired ground or water obtained from elsewhere. The quantities given in the schedule of quantities are only indicative being based on preliminary design and are liable to modification in the final design. The schedule of items and quantities include so far as can at present be determined, every materials which the Contractor is likely to be called upon to perform or supply. The rate quoted against individual item will be inclusive of everything necessary to complete the said items of the work within the contemplation of the contract and beyond the unit prices no extra payment will be allowed for individual or contingent work, labour and /or materials inclusive of all taxes and duties whatsoever except for specific items, if any, stipulated in the tender documents. The Contractor shall supply, fix and maintain at his own cost during the execution of any work necessary for alignment watching required not only for the proper execution and protection of the said work, but also for the protection of adjacent trees or plants and the safety of any adjacent roads, houses etc. The Contractor, shall at all times give access to staffs employed by the Employer or any man deployed on the project site and to allow such deployed staffs with proper identity for supervision or any other entrusted job.

9. Protective Measures:

The Contractor from the time of being placed in possession of the site must deploy security guards for watching and protecting the work, the site and surrounding property during their working hour. The Contractor shall indemnify the Employer against any possible damage to the adjoining areas, trees, roads during execution of the work.

10. Access:

The Employers/His Authorised Representatives shall at all times have free access to the work site/and or other places where materials are being kept/stored for the contract and also to any place the materials are lying or from whom they are being obtained and the Contractor shall give every facility to the Employer and their representatives necessary for inspection and examination and test of the materials and workmanship. Except the representatives of Public Authorities no person shall be allowed on the work at any time without the written permission of the Employer. If any work is to be done at a place other than the site of the work, the Contractor shall obtain the written permission of the Employer for doing so.

11. Quality of Materials & Workmanship:

All the works specified and provided for in the specification or which may be required to be done in order to perform and complete the work or part thereof shall be executed in the best and most workmanlike manner with materials to the best and approved quality of the respective kinds in accordance with the particulars contained in and implied by the specification and as

represented by the drawings/maps or according to such other additional particulars and instructions as may from time to time be given by the Employer during the execution of the work and to their entire satisfaction.

12. Removal of Improper Work:

The Employer shall during the progress of the work have power to order in writing from time to time for the removal of any Improper work within such reasonable time as may be specified in the order, which in the opinion of the Employer are not in accordance with the specifications or their instructions, and the Contractor shall forthwith carry out such an order. The Employer shall have the power to employ and pay other persons to carry out the same and all expenses consequent thereon or incidental there to as certified by the Employer shall be borne by the Contractor or may be deducted by the Employer from any money due or that may become due to the Contractor.

13. Engagement of Technical Personnel :

The contractor shall immediately after receiving letter of acceptance of the tender and before commencement of work will intimate in writing to the Divisional Manager, Kolkata Forest Corporation Division, WBFDCCL for approval of technical personnel to be deployed for the assigned job. If no such technical representative(s) is /are effectively appointed or is effectively attending or fulfilling the provision of clause – 2.B of I.T.B. of this NIEt, a recovery (Non Refundable) shall be effected from the contractor as specified in the Schedule of “RECOVERY FOR NON ENGAGEMENT OF TECHNICAL PERSON, Table-2” attached with this NIEt. The decision of Divisional Manager, Kolkata Forest Corporation Division in this respect will be final and binding on the contractor.

14. Contractor’s Employees:

The Contractor shall keep for the full time qualified engineers and skilled supervisors defined in the ITBA and approved by the Employer, assisted with adequate staff constantly on the work, who will be responsible for the carrying out of the work to the true meaning of the specifications and schedule and quantities and instructions and directions given to him by the Employer. Any directions or instructions given to him in writing shall be held to have been issued to the Contractor officially.

The Employer/Authorized representative will have at all times access to the work site for inspection and examination of the work and materials proposed to be used. Authorised representatives of the Contractor shall have power of Attorney for receiving materials, cheque, signing measurement book etc. Any Supervisor, foreman, labour or other persons employed on the work by the contractor who fails or refuses to perform the work in the manner specified herein shall be discharged immediately and such person shall not again be employed on the work. When required in writing by the Employer the Contractor shall discharge any person(s) who is in their opinion incompetent, disorderly or otherwise unsatisfactory. Such Discharge shall not be the basis of any claim for compensation or damages against the Employer or any of its officers or employees.

No labour shall be employed on the work who is below the age of eighteen years and who is not an Indian National. If female labour is engaged the Contractor shall make necessary provision for safeguarding small children and keeping them clear of the site of operations. The Contractor shall at his own expenses provide or arrange for provision of foot-wear for any labour doing the any specific work. Any labourer supplied by the Contractor to be engaged on the work on daily work basis either wholly or partly under the direct order or control of the Employer or their representative shall be deemed to be a person employed by the Contractor. The Contractor shall comply with the provisions of all labour legislation including the requirements of payment of wages Act. 1936, minimum wages Act, 1948 and Workman’s Compensation Act the rules framed there under and modifications thereof in respect of men employed by him in carrying out the contract.

The Contractors shall keep the Employer saved, harmless and indemnified against claims if any of the workmen and all costs and expenses as may be incurred by the Employer in connection with any claim that may be made by any workman. The Contractor shall arrange to provide first aid treatment to the labourers engaged on the works. He shall within 24 hours of the occurrence of any accident at or about the site or in connection with execution of the works, report such accident to the Employer and also to the competent authority where such report is required by law.

15. Working Hours:

To be intimated at the time of issuance of work order.

16. Temporary Water Supply:

The Contractor shall make suitable arrangement for supply of water for the work. The Contractor shall have to make their own arrangement for carrying water at the work site.

17. Clearing Away:

All rubbish and superfluous materials either from Contractor’s own work or from works of other agencies shall be removed from the plantation site on completion to the satisfaction of the Employer.

18. Sub-contract:

Sub-contracting not allowed.

19. Agreement:

The successful Tenderer shall have to enter into an agreement with the Employer. Stamp duty and all other costs connected with execution of such agreement shall be borne by the successful Tenderers.

20. Defect Liability Period:

If the contractor or his workmen or servants or authorized representatives shall break, deface, injure, or destroy any part of building, in which they may be working, or any building, road, road-curbs, fence, enclosure, water pipes, cables, drains, electric or telephone posts or wires, trees, grass or grassland or cultivated ground contiguous to the premises, on which the work or any part of it is being executed, or if any damage shall happen to the work from any cause whatsoever or any imperfection become apparent in it at any time whether during its execution or within a period of five years, hereinafter referred to as the Defect Liability Period, from the actual date of completion of work as per completion certificate issued by the Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited the contractor shall make the same good at his own expense, or in default, the Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited may cause the same to be made good by other workmen and deduct the expense (of which the certificate of the Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited shall be final and binding on all concerned) from any sums, whether under this contract or otherwise, that may be then, or at any time thereafter become due to the contractor from the WBFDC Ltd. or from his security deposit, either full, or of a sufficient portion thereof and if the cost, in the opinion of the Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited (which opinion shall be final and conclusive against the contractor), of making such damage or imperfection good shall exceed the amount of such security deposit and/or such sums, it shall be lawful for the WBFDC Ltd. to recover the excess cost from the contractor in accordance with the procedure prescribed by any law for the time being in force.

21. Refund of Security Deposit:

- (i) No amount shall be refunded to the contractor for first 3 years from the actual date of completion of work.
- (ii) 30% of the same shall be refunded to the contractor on expiry of four years from the actual date of completion of work.
- (iii) The balance 70% of the same shall be refunded to the contractor on expiry of five years from the actual date of completion of the work.

(iv) No interest will be paid on the Security Deposit.

However, refund of Security Deposit shall be subject to clause 20 of General Terms & Conditions of Contract.

22. Materials:

The selected Contractor must arrange to procure all materials required for the proper completion of the work. The Employer will not on any account be responsible for procuring the same. The non-availability of the above materials shall not in any way be considered to be an excuse for the extension of time.

23. Method of Measurement:

Unless otherwise mentioned in the schedule of quantities the measurement will be net quantities of the work produced in accordance with the up-to-date rules laid down by the Indian Standard Institution. In the event of any disputes with regard to the measurement of work executed the decision of the Employer shall be final and binding.

24. Force majeure :

If the work(s) be delayed for the following reasons:

Due to war, internal emergency and other conditions such as abnormally bad weather, flood, cyclone natural calamity or serious loss or damage by fire or civil commotion, the contractor shall immediately give notice thereof in writing to the Divisional Manager, Kolkata Forest Corporation Division, WBFDC Ltd. but shall nevertheless use constantly his/her best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Divisional Manager, Kolkata Forest Corporation Division, WBFDC Ltd. to proceed with the works.

25. PAYMENT:

For works of tendered value above Rs 25.00 lakh, for running account bill payment, the contractor shall on submitting a bill of at least Rs 25.00 lakh there for, be entitled to receive a payment proportionate to the part thereof as approved and passed by the Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the contractor. But all such intermediate payments shall be regarded as payments by way of advance against the final measured bill payment only and not as payments for work actually done and completed, and shall not preclude the bad, unsound, and imperfect or unskilful work which is to be removed and taken away and reconstructed, or re-erected or to be considered as an admission of the due

performance of the contract, or any part thereof, in any respect, or the accruing of any claim, nor shall it conclude, determine or affect in any way the powers of the Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract. The final bill shall be submitted by the contractor within one month of the date fixed for completion of the work, otherwise the Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited's certificate of the measurement and of the total amount payable for the work accordingly shall be final and binding on all parties.

While making any payment to the Contractor, initially only 80% of approved bill amount will be paid. The contractor shall have to make full payment of applied GST on approved bill amount and the contractor shall have to submit the GSTR-1 and GSTR-3B against paid GST. Once WBFDC is able to take input tax credit in GSTR-2B then immediately the contractor will get balance 20% of approved bill amount. If the contractor fails to deposit the GST amount of approved bill / doesn't submit GSTR-1 and GSTR-3B, withheld 20% of approved bill amount will be forfeited.

26. Final Payment:

Within 10 (Ten) days of completion of work, the contractor shall give notice of such completion to the Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited and within 14 (Fourteen) days of receipt of such notice, the Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited shall inspect the work, and if there is no defect in the work, he/she shall furnish to the contractor a final certificate of completion. Otherwise, a provisional certificate of physical completion indicating defects (a) to be rectified by the Contractor and/or (b) for which payment will be made at reduced rates, shall be issued. Such reduced rate is to be imposed with the approval of General Manager (HQ), WBFDC Ltd. Final Payment will be subject to availability of fund, administrative approval and financial sanction from the competent authority.

27. Compensation for delay:

The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall throughout the stipulated period of the contract be proceeded with all due diligence. Time being deemed to be the essence of the contract on the part of the contractor, the contractor shall be bound in all cases, to achieve the 'Milestones' as defined under Table-1 of this NIT pertaining to the work. In the event of the contractor failing to comply with any of the conditions related to achieving the 'Milestones' within the specified time period prescribed for such 'Milestone' plus one month, he/she shall be liable to pay compensation. If the contractor fails to commence and/or maintain required progress viz. Milestones defined in the Notice Inviting Tender over the total time allotted for its full completion and in terms of Table-1 of this NIT or fails to complete the work and clear the site on or before the end of contract period or extended date of completion, he/she shall, without prejudice to any other right or remedy available under the law on account of such breach, pay as agreed compensation to the implementing Department. This will also apply to items or group of items for which a separate period of completion has been specified.

Compensation for delay of work: @ 2% (Two percent) of the tendered value of work arrived for each month of delay to be computed on per day basis subject to the ceiling limit of security deposit already withheld or due to be withheld during imposition of the said clause and minimum payable compensation equivalent to the Earnest Money deposited (EMD).

Provided always, that the total amount of compensation for delay, to be paid under this clause shall not exceed 10% of the tendered value of work or the tendered value of the item or group of items of the work, for which a separate period of completion is originally given.

The amount of compensation may be adjusted or set-off against any sum payable to the contractor under this contract, if the contractor catches up with the progress of work subsequently, part or full of the desired progress as per the contract in accordance with the decision of the Tender Accepting Authority, under powers delegated by Government to be communicated by the Divisional Manager, Kolkata Forest Corporation Division, WBFDC Ltd., the withheld amount shall be released. However, no interest, whatsoever, shall be payable on such withheld amount.

28. Substitution:

Should the Contractor desire to substitute any materials and workmanship, he must obtain the approval of the Employer, in writing for any such substitution well in advance.

29. Escalation of Prices:

The rates quoted by the Contractor shall be firm throughout the tenure of the contract (including extension of time, if any granted) and will not be subject to any fluctuation due to increase in cost of materials, labour, sales tax, Octroi etc.

30. Damage to Persons and Property:

The Contractor shall be responsible for all injury to persons/labourers, animals or things, and for all damage to the public or private property which may arise from the operations or neglect of himself whether such injury or damage arises from carelessness, accident or any other cause whatever in any way connected with the carrying out of his contract. This clause shall be held to include, internally, any damage to persons/labourers, animals or things, and for all damage to the public or private property, whether immediately adjacent or otherwise and any damage to roads, footpaths, bridges or ways forming the subject of this contract by frost, rain, wind or other inclemency of the weather.

The contractor shall indemnify the employer and held them harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of Government or other wise and also in respect of any award or compensation or the Contractor shall restore and repair all damage of every sort mentioned in this clause so as to deliver up to the whole of contract works complete and perfect in every respect so as to make good or otherwise satisfy all claims for damage to the property of the third parties. The contractor shall indemnify the Employer against all claims which may be made against the Employer by any member of the public or other third party in respect of anything which may arise in respect of the works or in consequence thereof and shall at his own expense arrange to effect and maintain, until the completion of the contract

31. Termination of Contract by Employer:

If the contractor (being an individual or a firm) commit any act of insolvency or shall be adjudged as an insolvent or shall make an assignment or composition of the greater part in number or amount of his creditors or shall enter into a deed of assignment with his creditors, or (being incorporated company), shall have an order made against him or pass an affective resolution for winding up either compulsorily or subject to the supervision of the court or voluntarily, or if the official assignee of the contractor shall repudiate the contract, or if the official assignee or the liquidator in any such winding up shall be unable within 7 (Seven) days after notice to him requiring him to do so, to show to the reasonable satisfaction of the employer that he is able to carry out and fulfil the contract and if required by the employer to give security or if the contractor (whether in individual form or incorporated company) shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the contractor or if the contractor shall assign or sublet the contract without the consent in writing of the employer first obtained if the contractor shall change or encumber this contract or any payment due to which may become due to the contractor their under or if the employer shall certify in writing of that in his opinion the contractor :

- a) has abandoned the contract, or
- b) has failed to commence the work, or has without any lawful excuse under these conditions suspended the progress of the work for 14 days after receiving from the Employer written notice to proceed, or
- c) has failed to proceed with the work such due diligence and failed to make such due progress as would enable the work to be completed within the time agreed upon, after receiving from Employer to employ more men, or,
- d) has failed to remove materials from site or to pull down and retained work within 7 days after receiving from the Employer as written notice that the said materials or work were condemned or rejected by the Employer under those conditions, or,
- e) has neglected or failed persistently to observe and perform all or any of the acts, matter or things by this contract to be observed and performed by the Contractor for 7 days after written notice shall have been given to the contract requiring the Contractor to observe or perform the same, or
- f) has to the detriment of good workmanship or define of the Employers instruction to the contrary sub-contract any part of the contract.

Then and in any of the said causes the employer not withstanding any previous order after giving 7 (Seven) days notice in writing to the contractors, determine the contract, but without thereby affecting the powers of the employer of the obligations and liabilities of the contractor, the whole of which shall continue to be in force as fully as if the contractor has not been so determine and as if the works subsequently executed has been executed by or on behalf of the contractor and further the employer, his agents or representative may enter upon and take possession of the works and all plants, tools, shades, machinery and other power tools, utensils and materials, lying upon the premises or the adjoining land or roads and use the same as his own property or may employ the by means of his own representative and workman in carrying on and completing the work or by employing any other contractors or other persons or person to complete the work, and the contractor shall not in any way interrupt, or do any matter or thing to prevent or hinder such other contractor or other person or persons employed for completing and finishing or using the materials and plant for the work when the works shall be completed or as soon thereafter as convenient, the employer shall give a notice in writing to the contractor to remove his surplus materials and plant and should

the contractor failed to do so within a period of 14 (Fourteen) days after receipt thereof by him the employer may sell the same by public auction and shall give credit to the contractor or for the amount so realised.

The employer shall thereafter ascertain and certify in writing under his hand that (if anything) shall be due or payable to or by the employer, for the value of the said plant and materials so taken possession of by the employer and the expense or loss which the employer shall have been put to in getting the work to be so completed and amount if any owing to the contractor and the amount which shall be certified shall there upon be paid by the employer as the case may be and the certificate shall there upon be paid by the employer, as the case may be and the certificate of the employer shall be final and conclusive between the parties.

32. Settlement of Dispute, Arbitration:

Except where otherwise provided in the Contract, all questions and disputes relating to the meaning of the specifications, designs, drawings and instruction herein before mentioned and as to the quality of workmanship or materials used on the work, or as to any other question, claim, rights, matter, or things whatsoever, in any way arising out of or relating to the contract, design, drawings, specifications estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure or execute the same, whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to the sole arbitration of the Managing Director, WBFDC Ltd.

Divisional Manager
Kolkata Forest Corporation Division
West Bengal Forest Development Corp. Ltd.

SCHEDULE OF WORK**Table-1**

<i>Milestone</i>	<i>Date of Occurrence of Milestone</i>	<i>Financial Value of Work to be completed within 15 days of occurrence of Milestone</i>
<i>Work Milestone - I</i>	Date falling on 1/4th (one fourth) of total time of completion	Not less than 15% (Fifteen percent) of the Contract Price.
<i>Work Milestone – II</i>	Date falling on 2/4th (two fourth) of total time of completion	Not less than 40% (Forty percent) of the Contract Price.
<i>Work Milestone – III</i>	<i>Date falling on 3/4 th (Three Fourth) of total time of completion</i>	Not less than 60% (Sixty percent) of the Contract Price.
<i>Schedule Completion</i>	On or Before Scheduled Completion date	100% (hundred percent) of the Contract Price.

SCHEDULE OF RECOVERY FOR NON-ENGAGEMENT OF TECHNICAL PERSON

Table-2

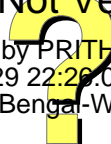
Recovery Schedule (Non-Refundable) for Non engagement of Technical Representative in the work will be as follows ----

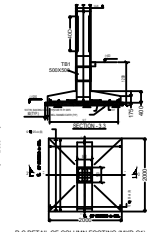
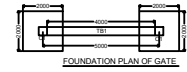
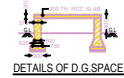
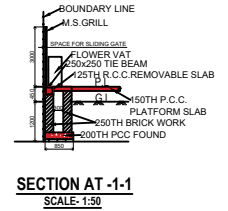
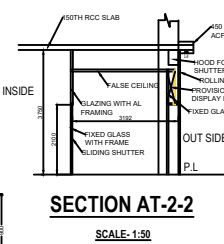
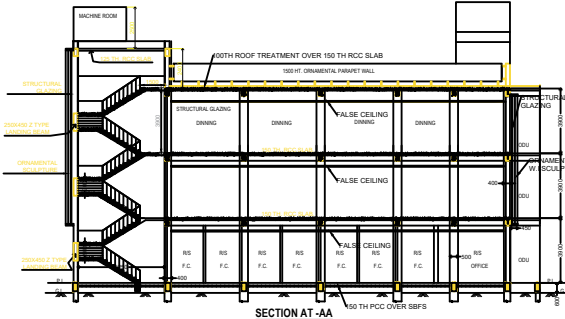
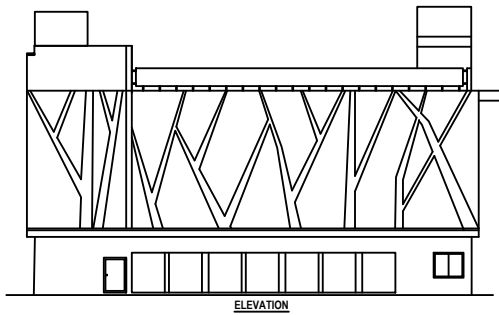
Sl. No.	Category of Technical Person	Amount of Recovery (Non-Refundable) per day in Rupees
1	Principal Technical Person must have BE /B Tech/ B.Sc in Civil Engineering or Equivalent in Civil Engineering with minimum 5 years post qualification experience.	1500/- (Rupees One Thousand Five Hundred Only)
2	Other Technical Person (must have Diploma in Civil Engineer / LCE or Equivalent with minimum 3 years post qualification experience.	1000/- (Rupees One Thousand only)

Recovery Schedule (Non-Refundable) for Non engagement of Technical Representative as Electrical Engineer in the work will be same as mentioned in Table-2 above.

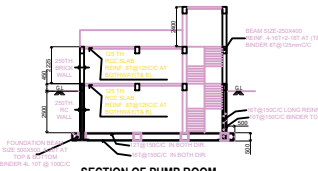
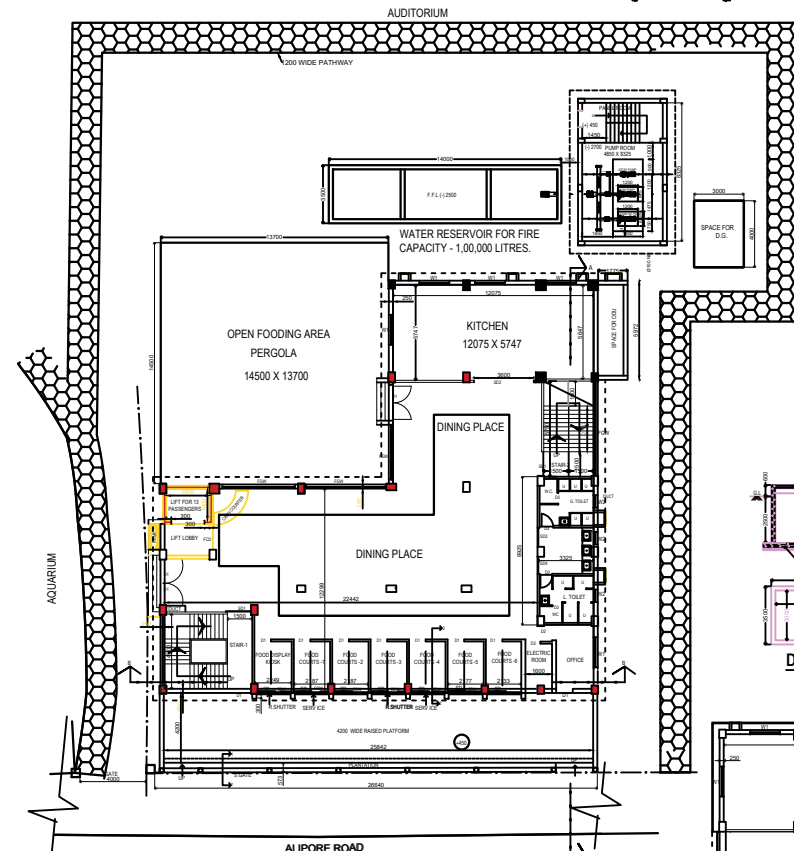
Signature Not Verified

Digitally signed by PRITHWIS GHOSH
Date: 2024.01.29 22:26:03 IST
Location: West Bengal-WB

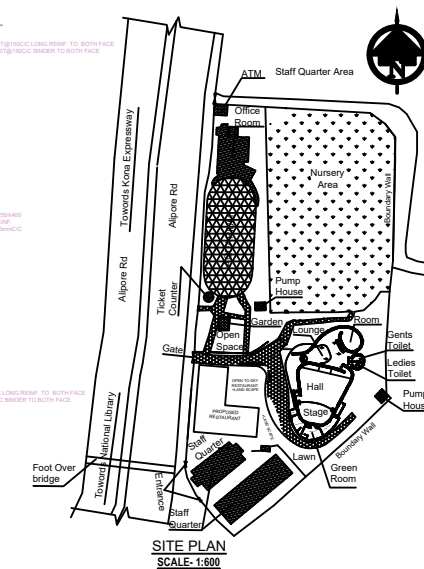
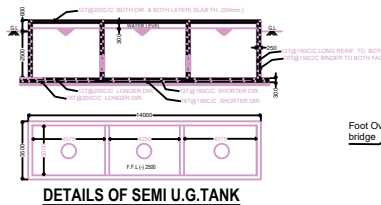




RC DETAIL OF BOUNDARY GATE PILLAR



DETAILS OF PUMP ROOM



AREA STATEMENTS

1. PROPOSED GROUND FLOOR AREA - 496.272 SQM / 5331 SFT.
2. PROPOSED 1ST & 2ND FLOOR AREA - 496.272 SQM / 5331 SFT.

TOTAL COVERED AREA - 1485.816 SQM/15993 SFT.

DOORS AND WINDOWS SCHEDULE

NO.	AS PER ROOM SCHEDULE	DOOR/ WINDOW TYPE	DOOR/ WINDOW SIZE
001	AS PER ROOM SCHEDULE	GLASS DOOR	2100 X 1000
002	AS PER ROOM SCHEDULE	GLASS WINDOW	1500 X 1000
003	AS PER ROOM SCHEDULE	GLASS WINDOW	1500 X 1000
004	AS PER ROOM SCHEDULE	GLASS WINDOW	1500 X 1000
005	AS PER ROOM SCHEDULE	GLASS WINDOW	1500 X 1000
006	AS PER ROOM SCHEDULE	GLASS WINDOW	1500 X 1000
007	AS PER ROOM SCHEDULE	GLASS WINDOW	1500 X 1000
008	AS PER ROOM SCHEDULE	GLASS WINDOW	1500 X 1000
009	AS PER ROOM SCHEDULE	GLASS WINDOW	1500 X 1000
010	AS PER ROOM SCHEDULE	GLASS WINDOW	1500 X 1000

SPECIFICATION & NOTES

1. ALL DIMENSIONS & LEVELS ARE IN MILLIMETRES UNLESS OTHERWISE MENTIONED.
2. ALL BRICK WORK SHALL BE DONE WITH CEMENT MORTAR (1:6) USING HALF-BRICKS ONLY.
3. FOR SPECIFICATION OF MATERIALS & WORKMANSHIP FOLLOWED BY M.S.C. 1994.
4. DEPTH OF THE UNDER GROUND WATER RESERVOIR SHALL NOT EXCEED BY THE FOUNDATION DEPTH OF THE BUILDING.
5. CONCRETE GRADE (M20) SHALL BE M-20 (1:2) WITH 20mm CN. AGG. FOR STRUCTURE & SLAB FOR FOUNDATION WORK.
6. REINFORCEMENT SHALL BE IN ACCORDANCE WITH IS:1786 OR IS:1786 OF CHARACTERISTIC STRENGTH 550 N/mm² (F_y550).
7. LAP LENGTH OF BARS SHALL BE AS FOLLOWS:-
(i) FOR COLUMN FOOTING - 1500 mm.
(ii) FOR GROUND BEAM AND COLUMN - 40 mm.
(iii) FOR BEAMS AND LINTEL - 25 mm.
(iv) FOR SLAB AND CHAJJA - 2015 mm.

SGN. OF ENGINEER AND REGISTERED ARCHITECT
E.S. NO. 1532 (I) KM. CT.

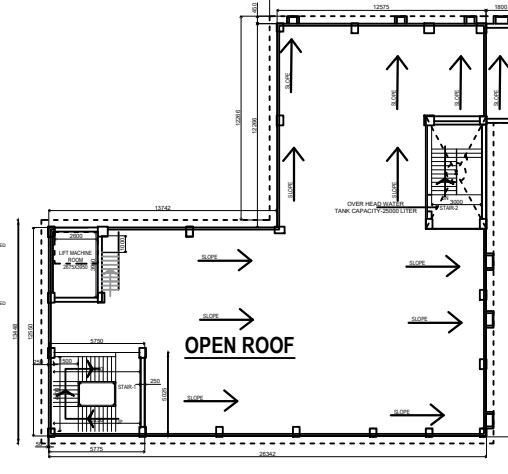
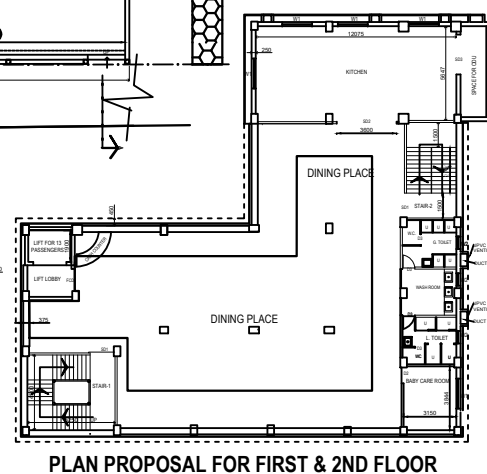
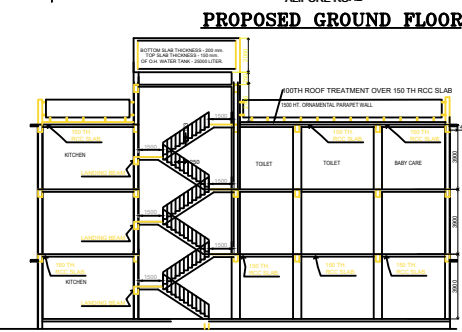
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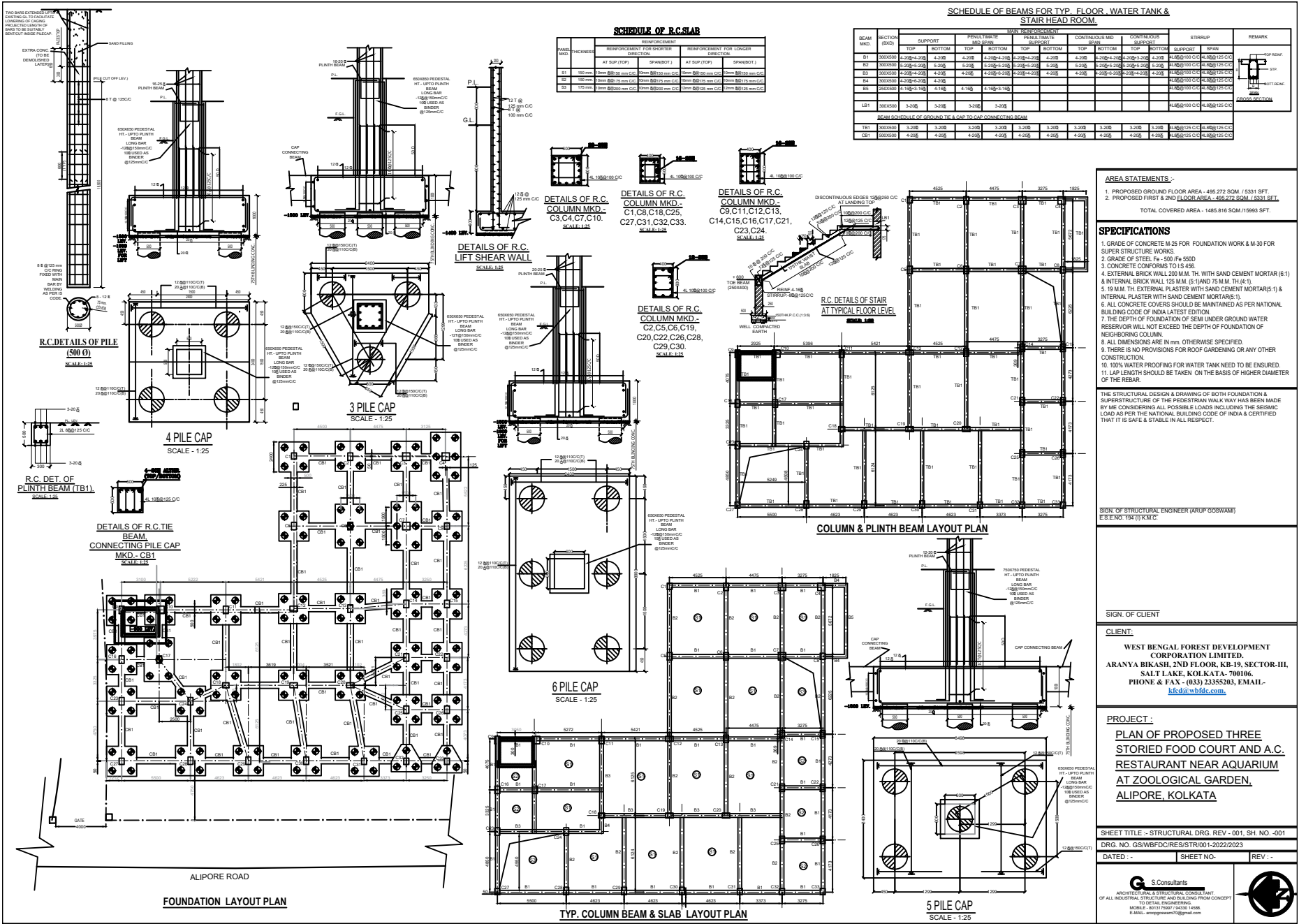
CLIENT:
WEST BENGAL FOREST DEVELOPMENT CORPORATION LIMITED,
ARANYA BIKASH, 2ND FLOOR, KB-19, SECTOR-III,
SALT LAKE, KOLKATA - 700106.
PHONE & FAX - (033) 23355203, EMAIL - kfd@wbfd.com.

PROJECT:
PLAN OF PROPOSED THREE STORED FOOD COURT AND A.C. RESTAURANT NEAR AQUARIUM AT ZOOLOGICAL GARDEN, ALIPORE, KOLKATA

SHEET TITLE - ARCHITECTURAL DRG. REV. - 001, SH. NO. - 001
DRG. NO. GS/WBDC/RES/ARCH/001/2022/2023
DATED - / / SHEET NO. - / REV. - /

G S Consultants
ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, ENVIRONMENTAL & INTERIOR DESIGNING FROM CONCEPT TO EXECUTION ENGINEERING
MOBILE - 9831739987 / 9832014408
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SCHEDULE OF R.C. SLAB

S.No.	THICKNESS	REINFORCEMENT FOR SHORTER DIRECTION		REINFORCEMENT FOR LONGER DIRECTION	
		AT SUP. (TOP)	SPANNING	AT SUP. (TOP)	SPANNING
1	150 mm	8mm @ 120mm c/c	8mm @ 120mm c/c	8mm @ 120mm c/c	8mm @ 120mm c/c
2	150 mm	8mm @ 120mm c/c	8mm @ 120mm c/c	8mm @ 120mm c/c	8mm @ 120mm c/c
3	150 mm	8mm @ 120mm c/c	8mm @ 120mm c/c	8mm @ 120mm c/c	8mm @ 120mm c/c

SCHEDULE OF BEAMS FOR TYP. FLOOR, WATER TANK & STAIR HEAD ROOM

BEAM MKD.	SECTION (BxD)	SUPPORT		SPAN REINFORCEMENT				CONTINUOUS MID SUPPORT		CONTINUOUS SUPPORT		STAIRUP	REMARK
		TOP	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP	BOTTOM		
B1	300x600	4-20@4-200	4-20	4-20	4-20@4-200	4-20@4-200	4-20	4-20	4-20@4-200	4-20@4-200	4-20	4-20@100 c/c	4-20@125 c/c
B2	300x600	4-20@4-200	4-20	4-20	4-20@4-200	4-20@4-200	4-20	4-20	4-20@4-200	4-20@4-200	4-20	4-20@100 c/c	4-20@125 c/c
B3	300x600	4-20@4-200	4-20	4-20	4-20@4-200	4-20@4-200	4-20	4-20	4-20@4-200	4-20@4-200	4-20	4-20@100 c/c	4-20@125 c/c
B4	300x600	4-20@4-200	4-20	4-20	4-20@4-200	4-20@4-200	4-20	4-20	4-20@4-200	4-20@4-200	4-20	4-20@100 c/c	4-20@125 c/c
B5	250x500	4-16@3-150	4-16	4-16	4-16@3-150	4-16@3-150	4-16	4-16	4-16@3-150	4-16@3-150	4-16	4-16@100 c/c	4-16@125 c/c
LB1	300x600	3-20	3-20	3-20	3-20							4-20@100 c/c	4-20@125 c/c

- #### AREA STATEMENTS :-
- PROPOSED GROUND FLOOR AREA - 496.272 SQM / 5331 SFT.
 - PROPOSED 1ST & 2ND FLOOR AREA - 496.272 SQM / 5331 SFT.
- TOTAL COVERED AREA - 1485.816 SQM/15993 SFT.

- #### SPECIFICATIONS
- GRADE OF CONCRETE M-25 FOR FOUNDATION WORK & M-30 FOR SUPER STRUCTURE WORKS.
 - GRADE OF STEEL Fe - 500 Fe 550D
 - CONCRETE CONFORMS TO IS 456.
 - EXTERNAL BRICK WALL 200 M.M. TH. WITH SAND CEMENT MORTAR (8:1) & INTERNAL BRICK WALL 125 M.M. (S) AND 75 M.M. TH (4:1).
 - 19 M.M. TH. EXTERNAL PLASTER WITH SAND CEMENT MORTAR (5:1) & INTERNAL PLASTER WITH SAND CEMENT MORTAR (5:1).
 - ALL CONCRETE COVERS SHOULD BE MAINTAINED AS PER NATIONAL BUILDING CODE OF INDIA LATEST EDITION.
 - THE DEPTH OF FOUNDATION OF SEMI UNDER GROUND WATER RESERVOIR WILL NOT EXCEED THE DEPTH OF FOUNDATION OF NEIGHBORING COLUMN.
 - ALL DIMENSIONS ARE IN MM. OTHERWISE SPECIFIED.
 - THERE IS NO PROVISIONS FOR ROOF GRADING OR ANY OTHER CONSTRUCTION.
 - 100% WATER PROOFING FOR WATER TANK NEED TO BE ENSURED.
 - LAP LENGTH SHOULD BE TAKEN ON THE BASIS OF HIGHER DIAMETER OF THE REBAR.

THE STRUCTURAL DESIGN & DRAWING OF BOTH FOUNDATION & SUPERSTRUCTURE OF THE PEDESTRIAN WALK WAY HAS BEEN MADE BY ME CONSIDERING ALL POSSIBLE LOADS INCLUDING THE SEISMIC LOAD AS PER THE NATIONAL BUILDING CODE OF INDIA & CERTIFIED THAT IT IS SAFE & STABLE IN ALL RESPECT.

SIGN. OF STRUCTURAL ENGINEER (ARUP) (GOSWAMI)
E: EENG@TBS (T)@GMAIL

SIGN. OF CLIENT
CLIENT:
WEST BENGAL FOREST DEVELOPMENT CORPORATION LIMITED,
ARANYA BIKASHI, 2ND FLOOR, KB-19, SECTOR-III,
SALT LAKE, KOLKATA - 700106.
PHONE & FAX - (033) 23355203, EMAIL -
kfc@wbfdcl.com.

PROJECT:
PLAN OF PROPOSED THREE STORED FOOD COURT AND A.C. RESTAURANT NEAR AQUARIUM AT ZOOLOGICAL GARDEN, ALIPORE, KOLKATA

SHEET TITLE - STRUCTURAL DRG. REV - 001, SH. NO. -001
DRG. NO. GSWBFDCL/RES/STR/001-2022/2023
DATED - SHEET NO. REV -

G.S. Consultants
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MOBILE - 9871070771, 9871070772
E-MAIL - arengoswami@gmail.com

AREA STATEMENTS -

1. PROPOSED GROUND FLOOR AREA - 495.272 SQM / 5331 SFT.
2. PROPOSED FIRST & 2ND FLOOR AREA - 495.272 SQM / 5331 SFT.

TOTAL COVERED AREA - 1485.816 SQM / 15993 SFT.

NO.	SIZE OF OPENING	REMARKS
001	20' PER WIDTH X 2'10" H	GLASS WINDOW HT-1950
002	2' PER WIDTH X 2'10"	GLASS WINDOW HT-1950
003	2' PER WIDTH X 2'10"	GLASS WINDOW HT-1950
004	2' PER WIDTH X 2'10"	GLASS WINDOW HT-1950
005	1200 X 2100	SLIDING DOOR WITH GLASS
006	1200 X 2100	WOODEN PANEL DOOR
007	1200 X 2100	WOODEN PANEL DOOR
008	1200 X 2100	WOODEN PANEL DOOR
009	1200 X 2100	WOODEN PANEL DOOR
010	1200 X 2100	WOODEN PANEL DOOR
011	1200 X 2100	WOODEN PANEL DOOR
012	1200 X 2100	WOODEN PANEL DOOR
013	1200 X 2100	WOODEN PANEL DOOR
014	1200 X 2100	WOODEN PANEL DOOR
015	1200 X 2100	WOODEN PANEL DOOR
016	1200 X 2100	WOODEN PANEL DOOR
017	1200 X 2100	WOODEN PANEL DOOR
018	1200 X 2100	WOODEN PANEL DOOR
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097	1200 X 2100	WOODEN PANEL DOOR
098	1200 X 2100	WOODEN PANEL DOOR
099	1200 X 2100	WOODEN PANEL DOOR
100	1200 X 2100	WOODEN PANEL DOOR

SPECIFICATION & NOTES -

1. ALL DIMENSIONS & LEVELS ARE IN MILLIMETRES UNLESS OTHERWISE MENTIONED.
2. ALL BRICK WORK SHALL BE DONE WITH CEMENT MORTAR (1:6) USING 14 CLASS BRICKS ONLY.
3. FOR SPECIFICATION OF MATERIALS & WORKMANSHIP FOLLOWED BY N.E.C. 1994.
4. DEPTH OF THE UNDER GROUND WATER RESERVOIR SHALL NOT EXCEED BY THE FOUNDATION DEPTH OF THE BUILDING.
5. CONCRETE GRADE / MIX SHALL BE M - 25 (1:1.2) WITH 20mm DN. AGG. FOR SUPERSTRUCTURE & M-25 FOR FOUNDATION WORK.
6. & DENOTE HIGH YIELD STRENGTH DEFORMED BAR CONFORMING TO IS-1786 OR 1786 OF CHARACTERISTIC STRENGTH 550 N/Sqmm (Fe-550D).
7. LAP LENGTH OF BAR SHALL BE AS PER LATEST IS-4526.
8. CLEAR COVER TO MAIN REINFORCEMENT SHALL BE AS FOLLOWS -
 (i) FOR COLUMN FOOTING = 7500 mm
 (ii) FOR GROUND BEAM AND COLUMN = 40 mm
 (iii) FOR BEAMS AND LINTEL = 25 mm
 (iv) FOR SLAB AND CHAJJA = 20/15 mm.

SIGN. OF ENGINEER: ARUP GOSWAMI, M.E. (SHIBPUR)
 L.B.S. NO. 1532 (I) K.M.C.

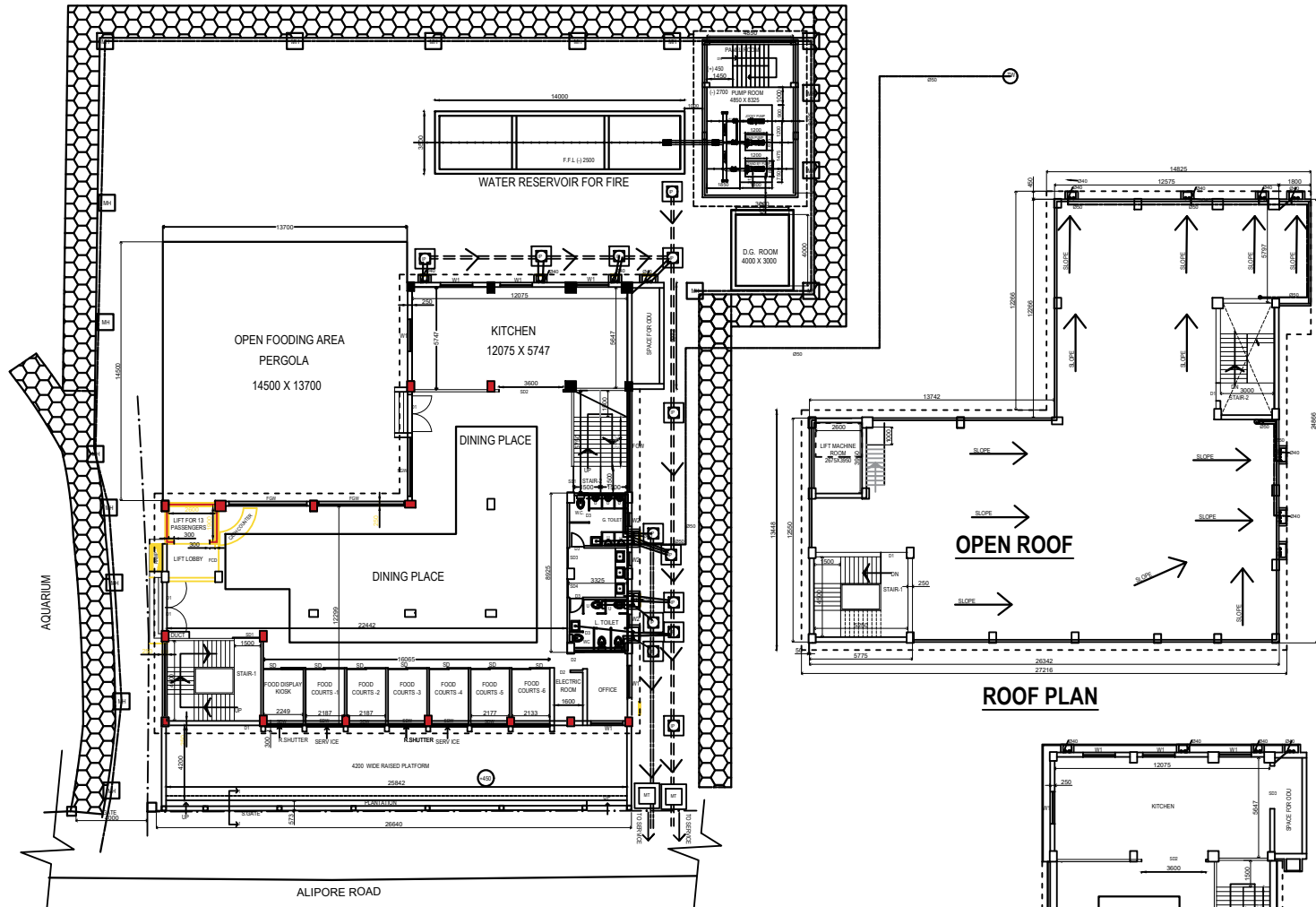
SIGN. OF CLIENT:

CLIENT:
 WEST BENGAL FOREST DEVELOPMENT CORPORATION LIMITED,
 ARANYA BIKASHI, 2ND FLOOR, K/B-19, SECTOR-III,
 SALT LAKE, KOLKATA - 700106.
 PHONE & FAX - (033) 23355203, EMAIL -
kfcd@wbfdco.com.

PROJECT:
 PLAN OF PROPOSED THREE STORIED FOOD COURT AND A.C. RESTAURANT NEAR AQUARIUM AT ZOOLOGICAL GARDEN, ALIPORE, KOLKATA

SHEET TITLE :- PLAN FOR SANITARY & PLUMBING
 DRG. NO. GS/WBDC/RES/S&P/001-2022/2023
 DATED :- SHEET NO- REV :-

G.S. Consultants
 ARCHITECTURAL & STRUCTURAL CONSULTANT.
 OF ALL INDUSTRIAL, STRUCTURE AND BUILDING FROM CONCEPT TO DETAIL ENGINEERING.
 MOBILE - 801375997 / 94330 14588.
 E.MAIL - arupgospwami7@gmail.com

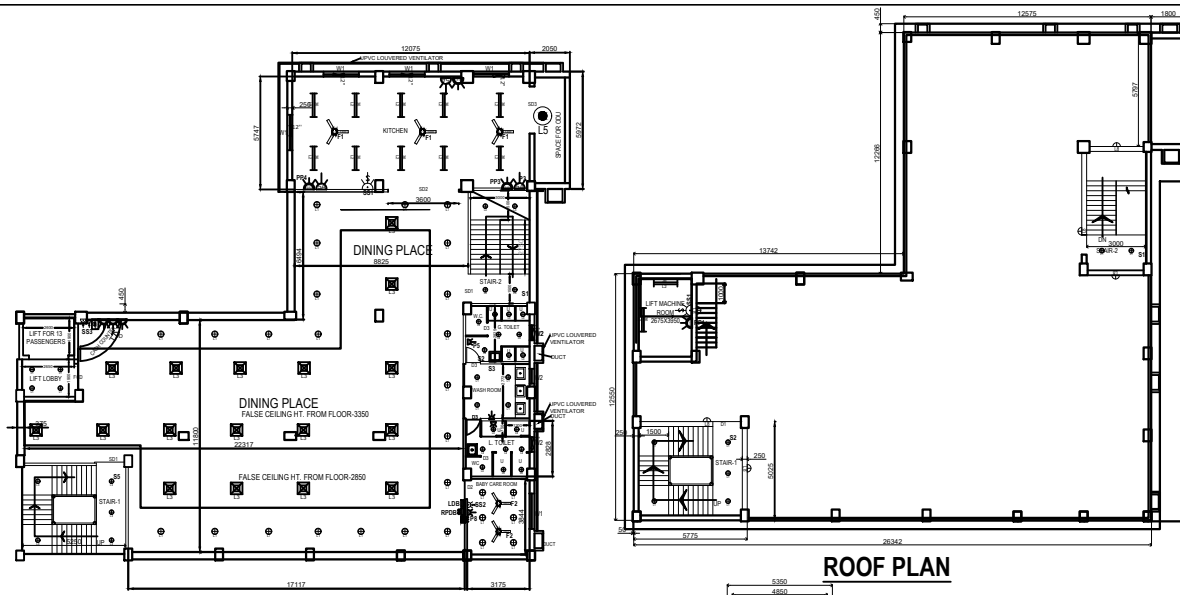


ALIPORE ROAD
PROPOSED GROUND FLOOR

ROOF PLAN

PLAN PROPOSAL FOR FIRST & 2ND FLOOR

LEGENDS	
DESCRIPTION	SYMBOLS
600 X 600 X H-INSPECTION PIT	[Symbol]
750 X 900 X H-MASTER PIT	[Symbol]
750 X 900 X H-MAN-HOLE PIT	[Symbol]
50MM DIA PIPE	[Symbol]
40MM DIA PIPE	[Symbol]
100MM SOIL PIPE	[Symbol]
150MM PVC WATER PIPE	[Symbol]
110 DIA PVC R/W PIPE	[Symbol]
110 DIA PVC WASTE PIPE	[Symbol]
110 DIA PVC SOIL PIPE	[Symbol]



ROOF PLAN

LEGENDS		
DESCRIPTION	SYMBOLS	QTY.
LED 15W DOWN LIGHT (RECESSED TYPE)(L1)	⊙	38
LED 30W BATTEN (L2)	⊢	10
LED 2'2" 30W PANEL LIGHT (L3)	⊠	17
LED 15W DOWN LIGHT (SURFACED TYPE)(L4)	⊙	27
SWITCH BOARD WITH 5 A PLUG SOCKET(S)	⊕	4
SWITCH BOARD WITHOUT 5 A PLUG SOCKET(S)	⊕	6
15A PLUG SOCKET WITH 20 A MODULAR SWITCH TYPE SP (MCB/PPS)	⊕	1
15A/5A PLUG SOCKET WITH SWITCH(PF)	⊕	4
5A PLUG SOCKET WITH SWITCH(PF)	⊕	6
DATA OUTLET (D)	⊕	1
TELEPHONE (T)	⊕	1
1400MM CEILING FAN(F1)	⊕	3
1200MM CEILING FAN(F2)	⊕	2
EXHAUST FAN(F3)	⊕	4
EXHAUST FAN(F4)	⊕	2
HORIZONTAL TRIPLE POLE & NEUTRAL DISTRIBUTION BOARD (LTPN DB - 400/100)	⊕	2
SINGLE POLE AND NEUTRAL DISTRIBUTION BOARD (LDB)	⊕	1
VERTICAL TRIPLE POLE & NEUTRAL DISTRIBUTION BOARD (VTN DB)	⊕	1

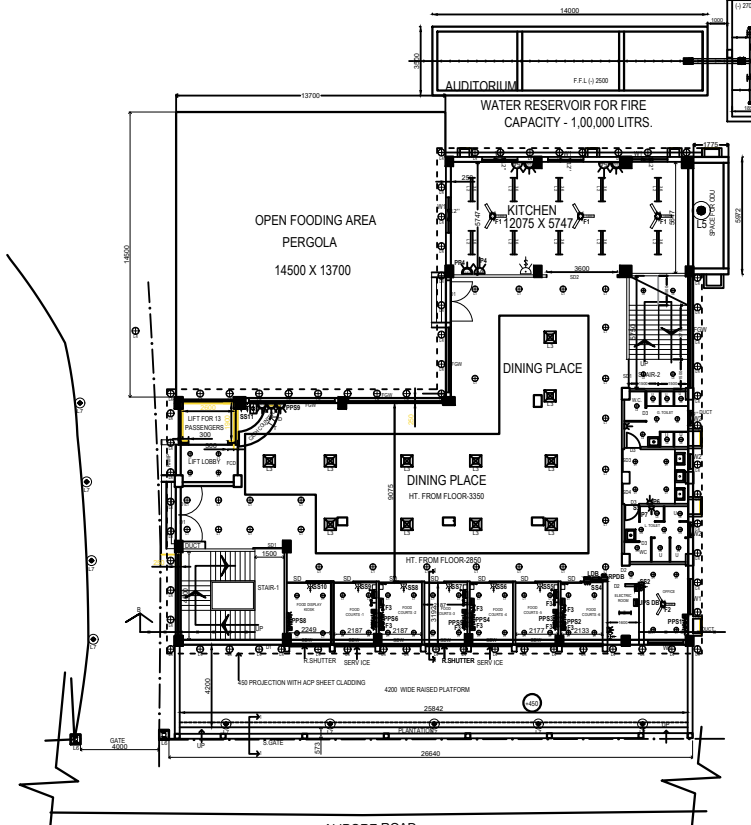
ELECTRICAL PLAN FOR FIRST & 2ND FLOOR

LEGENDS		
DESCRIPTION	SYMBOLS	QTY.
LED 15W DOWN LIGHT (SURFACED TYPE)(L4)	⊙	9
LED 30W BATTEN (L2)	⊢	2
BULKHEAD LIGHT (LB)	⊙	2+3
SWITCH BOARD WITH 5 A PLUG SOCKET(S)	⊕	1
SWITCH BOARD WITHOUT 5 A PLUG SOCKET(S)	⊕	2
15A/5A PLUG SOCKET WITH SWITCH(PF)	⊕	1

AREA STATEMENTS -

1. PROPOSED GROUND FLOOR AREA - 495.272 SQM. / 5331 SFT.
 2. PROPOSED FIRST & 2ND FLOOR AREA - 495.272 SQM. / 5331 SFT.

TOTAL COVERED AREA - 1485.816 SQM. / 15993 SFT.



LEGENDS		
DESCRIPTION	SYMBOLS	QTY.
LED 15W DOWN LIGHT (L1)	⊙	79+2
LED 30W BATTEN (L2)	⊢	14
LED 2'2" 30W PANEL LIGHT (L3)	⊠	18
LED 15W DOWN LIGHT (SURFACED TYPE)(L4)	⊙	31+4+1
LED 30W PENDANT LIGHT(L5)	⊕	8+1
GATE LIGHT(L6)	⊕	2
LIGHT POLE(L7)	⊕	9
SWITCH BOARD WITH 5 A PLUG SOCKET(S)	⊕	13
SWITCH BOARD WITHOUT 5 A PLUG SOCKET(S)	⊕	7
15A/5A PLUG SOCKET WITH SWITCH(PF)	⊕	7
5A PLUG SOCKET WITH SWITCH(PF)	⊕	7
1400MM CEILING FAN(F1)	⊕	3
1200MM CEILING FAN(F2)	⊕	1
WALL FAN(F3)	⊕	12
EXHAUST FAN(F4)	⊕	4
EXHAUST FAN(F5)	⊕	2
15A PLUG SOCKET WITH 20 A MODULAR SWITCH TYPE SP (MCB/PPS)	⊕	9
DATA OUTLET (D)	⊕	8
TELEPHONE (T)	⊕	8
HORIZONTAL TRIPLE POLE & NEUTRAL DISTRIBUTION BOARD (LTPN DB - 400/100)	⊕	1
SINGLE POLE AND NEUTRAL DISTRIBUTION BOARD (LDB)	⊕	3
VERTICAL TRIPLE POLE & NEUTRAL DISTRIBUTION BOARD (VTN DB)	⊕	1
MAIN SWITCH	⊕	9
HORIZONTAL TRIPLE POLE & NEUTRAL DISTRIBUTION BOARD (VTN DB)	⊕	2

SIGN. OF ENGINEER, ARUP GOSWAMI, ME (SHIBPUR)
 L.B.S. NO. 1532 (1) K.M.C.

SIGN. OF CLIENT

CLIENT.

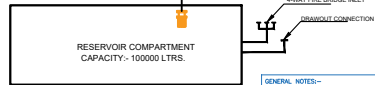
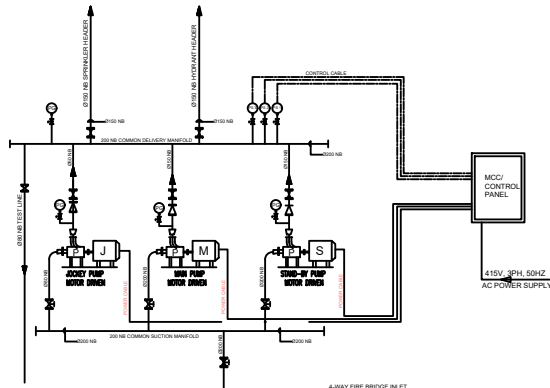
WEST BENGAL FOREST DEVELOPMENT CORPORATION LIMITED,
 ARANYA BIKASH, 2ND FLOOR, KB-19, SECTOR-III,
 SALT LAKE, KOLKATA - 700146.
 PHONE & FAX - (033) 23355263, EMAIL -
kfcd@wbfdco.com

PROJECT :

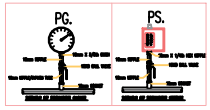
PLAN OF PROPOSED THREE STORIED FOOD COURT AND A.C. RESTAURANT NEAR AQUARIUM AT ZOOLOGICAL GARDEN, ALIPORE, KOLKATA

SHEET TITLE :- ELECTRICAL LAYOUT. REV - 001. SH. NO. -001
 DRG. NO. GS/WBDFC/RES/EELEC001-2022/2023
 DATE :- SHEET NO. REV :-

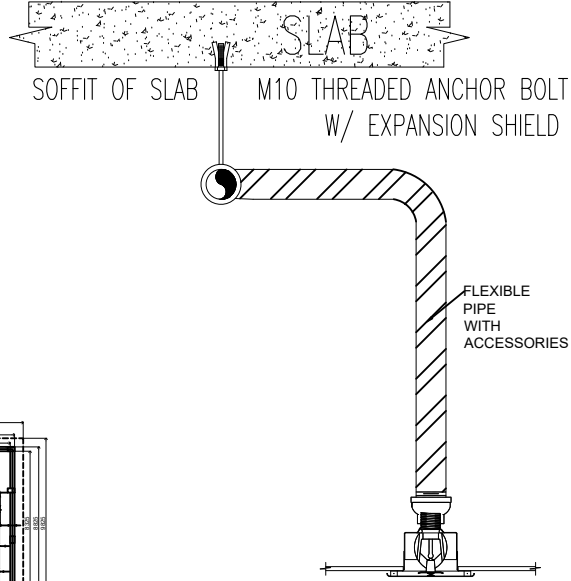
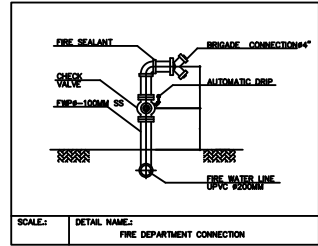
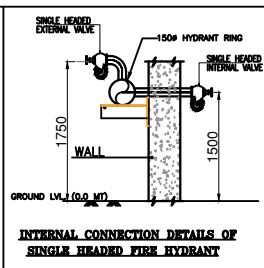
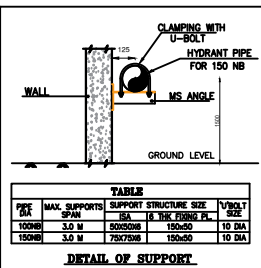
G S Consultants
 ARCHITECTURAL & STRUCTURAL CONSULTANT
 OF ALL INTERNAL STRUCTURE AND BUILDING FROM CONCEPT TO DETAIL ENGINEERING.
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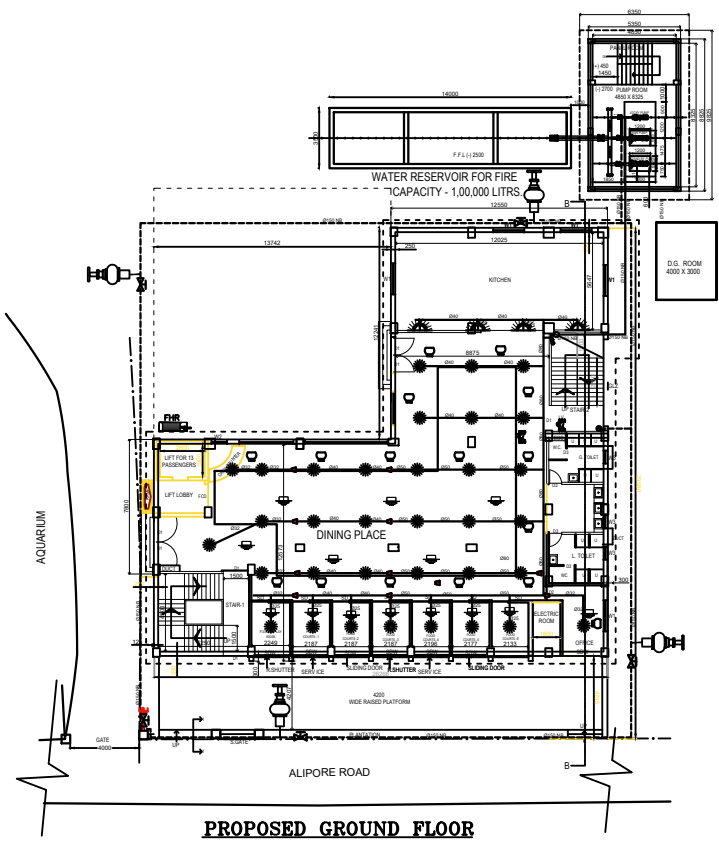
GENERAL NOTES:-
 1. ALL DIMENSIONS ARE IN MM.
 2. ALL MENTIONED PIPES ARE NOMINAL BORING SIZE.
 3. FIRE SUPPLYING CLAMP BOLDS ARE PROVIDED AS PER SITES IN SITE CONDITION.
 4. MAJOR MODIFICATIONS PIPE ROUTING SHALL BE CARRIED OUT AT SITE TO SUITE CONDITION.



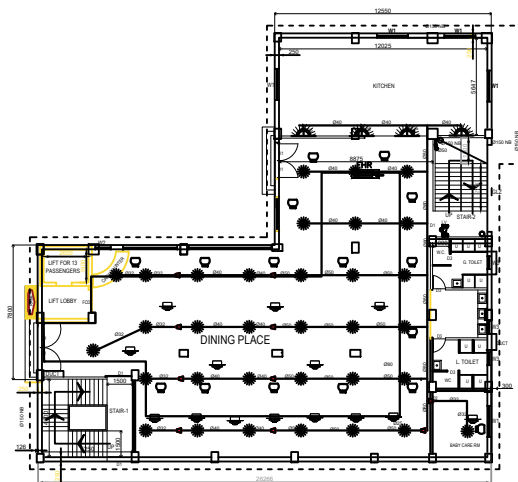
PUMP DATA						
PUMP ID	DESCRIPTION	CAPACITY (LPM)	HEAD (M)	DRIVE TYPE	CONTROL SYSTEM	OPERATION MODE
P1	FIRE PUMP (STAND BY)	2550	88	ELECTRIC MOTOR	MANUAL	MANUAL
P2	FIRE PUMP (STAND BY)	2550	88	ELECTRIC MOTOR	MANUAL	MANUAL
P3	JOCKEY PUMP (STAND BY)	180	88	ELECTRIC MOTOR	MANUAL	AUTO



SPRINKLER HEAD
 DETAILS OD PENDENT &
 UPRIGHT SPRINKLER



PROPOSED GROUND FLOOR



PLAN PROPOSAL FOR FIRST & 2ND FLOOR

AREA STATEMENTS:-
 1. PROPOSED GROUND FLOOR AREA - 495.272 SQM / 5331 SFT.
 2. PROPOSED FIRST & 2ND FLOOR AREA - 495.272 SQM / 5331 SFT.
 TOTAL COVERED AREA - 1485.816 SQM/15993 SFT.

LEGEND:-

---	150 DIA M.S "C"-CLASS HEAVY DUTY HYDRANT PIPE
---	150 DIA M.S "C"-CLASS HEAVY DUTY SPRINKLER PIPE
⊘	BUTTERFLY VALVE
⊘	GATE VALVE
⊘	NON RETURN VALVE
⊘	BALL VALVE
⊘	PRESSURE SWITCH
⊘	PRESSURE GAUGE
⊘	SUCTION STRAINER
⊘	LANDING VALVE
⊘	WALL SPRINKLER
⊘	PENDANT SPRINKLER
⊘	TRUE CEILING DETECTOR
⊘	SMOKE DETECTOR
⊘	FIRE HOSE REEL
⊘	INTERNAL FIRE HYDRANT
⊘	BUTTERFLY VALVE
⊘	GATE VALVE

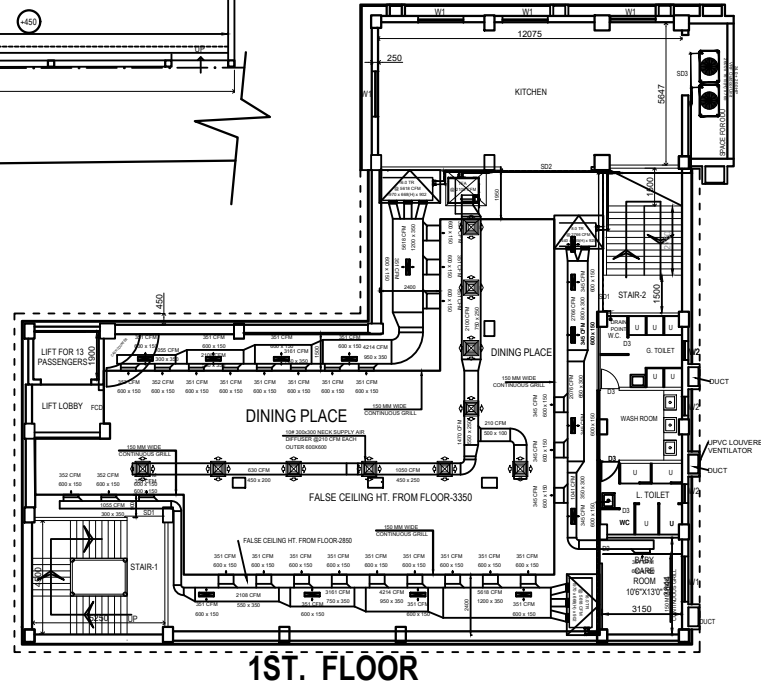
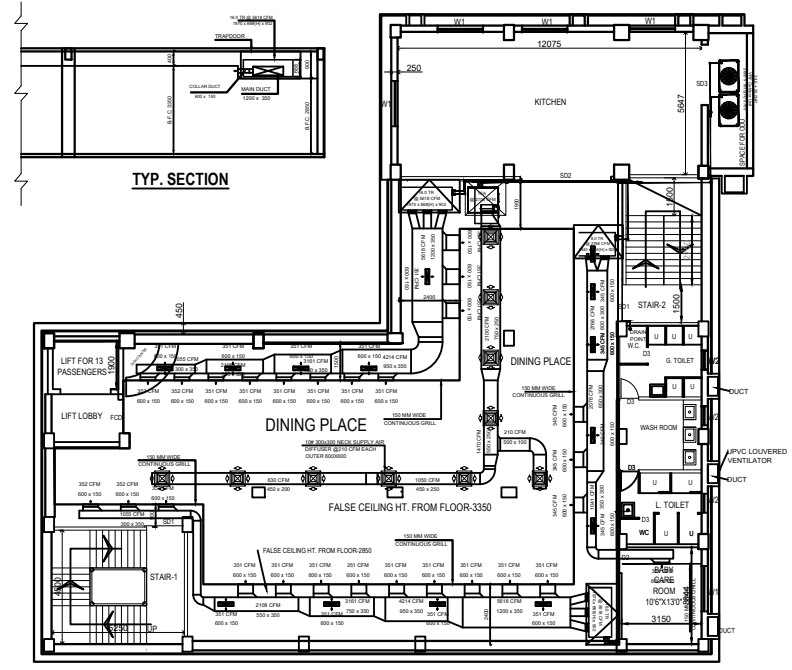
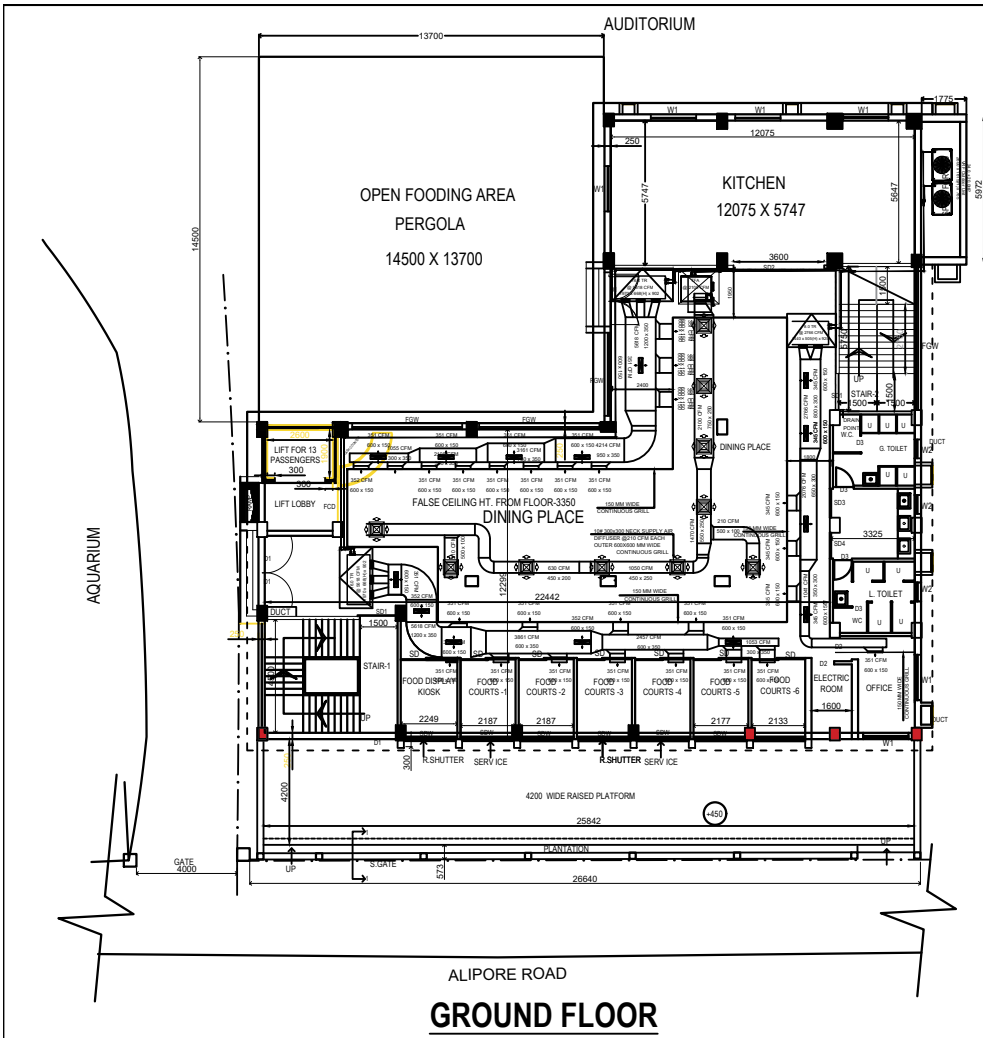
SIGN. OF ENGINEER: ARUP GOSWAMI, ME (SHIBPUR)
 LIC. NO. 13521/14/16

SIGN. OF CLIENT:
 WEST BENGAL FOREST DEVELOPMENT CORPORATION LIMITED,
 ARANYA BIKASHI, 2ND FLOOR, K.E-19, SECTOR-III,
 SALT LAKE, KOLKATA - 700106.
 PHONE & FAX - (033) 23355263, EMAIL -
me@wbfdc.com

PROJECT:
 PLAN OF PROPOSED THREE STORED FOOD COURT AND A.C. RESTAURANT NEAR AQUARIUM AT ZOOLOGICAL GARDEN, ALIPORE, KOLKATA

SHEET TITLE :- FIRE FIGHTING DRG. REV - 001. SH. NO. -001
 DRG. NO. GS/WBFD/CRS/FIRE/001/2022/2023

DATED :- SHEET NO. REV :-



SIGN. OF ENGINEER, ARUP GOSWAMI, ME (SHIBPUR)
L.B.S.NO. 1532 (I) K.M.C.

AREA STATEMENTS :-

- PROPOSED GROUND FLOOR AREA - 495.272 SQM. / 5331 SFT.
- PROPOSED FIRST & 2ND FLOOR AREA - 495.272 SQM. / 5331 SFT.

TOTAL COVERED AREA - 1485.816 SQM./15993 SFT.

SIGN. OF CLIENT

CLIENT:

WEST BENGAL FOREST DEVELOPMENT CORPORATION LIMITED.
ARANYA BIKASH, 2ND FLOOR, KB-19, SECTOR-III,
SALT LAKE, KOLKATA- 700106.
PHONE & FAX - (033) 23355203, EMAIL-
kfcd@wbfdc.com.

PROJECT :

PLAN OF PROPOSED THREE STORIED FOOD COURT AND A.C. RESTAURANT NEAR AQUARIUM AT ZOOLOGICAL GARDEN, ALIPORE, KOLKATA

SHEET TITLE :- SLD FOR HVAC SYSTEM

DRG. NO. GS/WBFD/RES/HVAC/001-2022/2023

DATED :- SHEET NO- REV :-

G S. Consultants
ARCHITECTURAL & STRUCTURAL CONSULTANT.
OF ALL INDUSTRIAL, STRUCTURE AND BUILDING FROM CONCEPT TO DETAIL ENGINEERING.
MOBILE - 9013175997 / 96330 14588.
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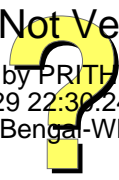
Proposed View





Signature Not Verified

Digitally signed by PRITHWIS GHOSH
Date: 2024.01.29 22:30:24 IST
Location: West Bengal-WB



**BOQ FOR PROPOSED FOOD COURT AND A.C. RESTAURANT NEAR AQUARIUM AT ZOOLOGICAL GARDEN,
ALIPORE, KOLKATA**

Sl. No	Description of works	Quantity	Unit	Rate (Rs.)	Amount Rs. P
CIVIL WORKS (SCHEDULED ITEMS)					
A. MASONRY WORK					
1.00	Dismantling all types of masonry excepting cement concrete plain or reinforced, stacking serviceable materials at site and removing rubbish as directed within a lead of 75 m.				
1.1	In ground floor including roof.	5	Cum	447.00	2,235.00
	Ref: PWD Sch(Bldg)2017,Page- 10, It-1(a)				
2.00	Providing Bored Cast-in-situ M-25 grade R.C.C. pile in position as per specifications in all kinds of soil including cost of boring using drilling mud to stabilize the bore and flushing the bore of excess mud with freshly prepared drilling fluid by using pumps prior to placing concrete by tremie pipe in one continuous operation and including the cost of all materials and labour for placing of concrete and also including the cost of mobilization and hire charges of all equipment necessary for boring, welding of reinforcement cage as necessary and lowering of reinforcement cage, preparation and placing of concrete, including the cost of concrete but excluding the cost of reinforcement and labour for bending binding etc. complete as per Drawing and Technical Specifications and removal of excavated earth with all lifts and lead upto 1000 m. Work to be executed as per IS: 2911 (Part II Sec 2).				
2.1	(a) Using hydraulic piling rig, 500mm dia	2740.00	Mtr	3,067.24	84,04,237.60
	Ref: PWD Sch(Bldg)2017,Page- 36, It-24(b) (ii) & Analysis				
3.00	Dismantling R.C. floor, roof, beams etc. including cutting rods and removing rubbish as directed within a lead of 75 m. including stacking of steel bars.				
	Ref: PWD Sch(Bldg)2017, Page- 10, It-3 (a) & (b)				
	In Ground floor including roof	43.00	Cum	1,956.00	84,108.00
4.00	Earth Work in excavation for foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the spoils within a lead of 75m as directed. The item includes necessary trimming the sides of trenches, levelling, dressing and ramming the bottom, bailing out water as required.				
4.10	Depth of Excavation not exceeding 1500mm	715.00	cum	119.27	85,278.05
	Ref: PWD Sch(Bldg)2017,Page- 1, It-2 a				
4.20	Depth of excavation for additional depth beyond 1,500 mm. and upto 3,000 mm. but not requiring shoring.	240.00	%Cum	19,238.00	46,171.20
	Ref: PWD Sch(Bldg)2017,Page- 1, It-2 b				

5.00	Hire and labour charges for shoring work (including necessary close plank walling, framing, Eucalyptus/Jhou bulla piling, strutting etc) complete as per direction of the Engineer-in-charge for foundation excavation (vertical surface are in contact with supported earth is to be measured.) (This item should be executed on specific direction of the Enginner in charge).				
5.10	Depth upto 1.5 m.	111.00	Sqm	386.00	42,846.00
	Ref: PWD Sch(Bldg)2017,Page- 3, It- 6(a)				
5.20	For additional depth beyond 1.5 m. and upto 3.00 M	111.00	Sqm	439.00	48,729.00
	Ref: PWD Sch(Bldg)2017,Page- 3, It- 6(b)				
6.00	Removal of mud/sludge/slurry/liquid earth obtained during piling work from the working site and disposal of the same beyond the KMC/Municipal or any suitable area with conformity of Municipal Corporation Rules using tanker including loading and unloading the same with pump, clearing the site complete in all respect as per direction of the Engineer-in-charge.				
6.100	For 500mm Pile	2740.00	Mtr	26.00	71,240.00
	Ref: PWD Sch(Bldg)2017,Page- 39, It- 26(b)				
7.00	Integrity testing of Pile using Low Strain / Sonic Integrity Test / Sonic Echo Test method in accordance with IS 14893 including surface preparation of pile top by removing soil, mud, dust & chipping lean concrete lumps etc. and use of computerized equipment and high skill trained personal for conducting the test & submission of results, all complete as per direction of Engineer-incharge				
7.10	Within 50 km. radius from Raj-Bhavan	85.00	Each	696.50	59,202.50
	Ref: PWD Sch(R&B)2018, Page- 300, It-12.24 (a)				
8	Performing Vertical load test on single Pile in accordance with IS:2911(Part-IV) by hydraulic jacks on pile/piles with 1.5 times the design load including preparation of the head of piles with concrete of required strength for receiving the jacks with all ancillary arrangements for setting up gauges, construction of suitable platforms, keeping the loads and dismantling and removing all arrangement etc. complete as per IS specification and direction of Engineer-in-charge				
8.1	Testing Load up to 100 T	3.00	Each	47,500.00	1,42,500.00
	Ref: PWD Sch(Road)2018, Page- 298, It-12.19 (i)				
9.00	Single Brick Flat Soling of picked jhama bricks including ramming and dressing bed to proper level and filling joints with local sand.	1,400.00	Sqm	361.00	5,05,400.00
	Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 1, It-1				
10.00	Ordinary Cement concrete (mix 1:2:4) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, if any, in ground floor as per relevant IS codes. a) Pakur Variety				

	Ref.-PWD Sch.2017 (Bldg)-3rd Corrigenda, P-10, Sl.no-27 & Analysis				
10.10	In Foundation and Ground floor	214.00	Cum	5268.53	11,27,465.42
10.20	In First Floor	32.00	Cum	5363.53	1,71,632.96
10.30	In Second Floor	32.00	Cum	5458.53	1,74,672.96
10.40	In Third Floor	58.00	Cum	5553.53	3,22,104.74
11.00	Controlled Cement concrete with well graded stone chips (20 mm nominal size) excluding shuttering and reinforcement with complete design of concrete as per IS : 456 and relevant special publications, submission of job mix formula after preliminary mix design after testing of concrete cubes as per direction of Engineer-in charge. Consumption of cement will not be less than 300 Kg of cement with Super plasticiser per cubic meter of controlled concrete but actual consumption will be determined on the basis of preliminary test and job mix fouxmula. In ground floor and foundation.[using concrete mixture] M 25 Grade a) Pankur Variety, In Foundation and Plinth				
	Ref.-PWD Sch.2017-3rd Corrigenda, P-11, Sl.no-29				
11.1	In Foundation and Ground floor	530.00	Cum	6327.04	33,53,331.20
11.20	In First Floor	137.00	Cum	6422.04	8,79,819.48
11.30	In Second Floor	137.00	Cum	6517.04	8,92,834.48
11.40	In Third Floor	36.00	Cum	6612.04	2,38,033.44
12.00	Controlled Cement concrete with well graded stone chips (20 mm nominal size) excluding shuttering and reinforcement with complete design of concrete as per IS : 456 and relevant special publications, submission of job mix formula after preliminary mix design after testing of concrete cubes as per direction of Engineer-in charge. Consumption of cement will not be less than 320 Kg of cement with super plasticiser per cubic meter of controlled concrete but actual consumption will be determined on the basis of preliminary test and job mix fouxmula. In ground floor and foundation. [using concrete mixture] M 30 Grade. a) Pakur Variety				
	Ref.-PWD Sch.2017 (Bldg)-3rd Corrigenda, P-11, Sl.no-30 & Analysis				
12.10	In Third Floor	16.00	Cum	6781.60	1,08,505.60
13.00	Ordinary Cement concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement if any, in ground floor as per relevant IS codes. (a) Pakur Variety				
	Ref:- 3rd Corrigenda, Sl. No-27, Page- 10				
13.1	In Ground Floor	24.00	Cum	5764.15	1,38,339.60
13.2	In First Floor	3.00	Cum	5859.15	17,577.45
13.3	In Second Floor	3.00	Cum	5954.15	17,862.45

13.4	In Third Floor	0.50	Cum	6049.15	3,024.58
14.00	Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor)				
14.10	25 mm to 30 mm shuttering without staging in foundation	710.00	Sqm	209.00	1,48,390.00
	Ref: PWD Sch(Bldg)2017, Page- 43, It-36 (f)				
14.2	Steel shuttering or 9 to 12 mm thick approved quality ply board shuttering in any concrete work				
	Ref: PWD Sch(Bldg)2017, Page- 42, It-36 (c)				
14.21	In foundation and ground floor	1,652.00	Sqm	369.00	6,09,588.00
14.22	In First Floor	1,000.00	Sqm	387.00	3,87,000.00
14.23	In Second Floor	1,000.00	Sqm	405.00	4,05,000.00
14.24	In Third Floor	418.00	Sqm	423.00	1,76,814.00
15.00	Supplying Steel Reinforcement for RCC works ready to use 'cut and bend' rebars (i.e stirrups for all types and shape,, bars of all shapes,tie bars, chairs etc. for slab, beams, columns, piles, rafts etc) of approved make from factory /workshop to construction site including placing in position and binding all complete as per direction of Engineer-in-Charge. Thermo- Mechanically Treated bars of grade 500D or more				
	For works in foundation and upto roof of ground floor/upto 4 m, TATA, SAIL, RINL				
	Ref: PWD Sch(Bldg)2017 Page-43, It-40 & 10th Corrigenda				
15.10	In Ground Floor	175.00	MT	54,940.30	96,14,552.50
15.20	In First Floor	23.00	MT	55,420.30	12,74,666.90
15.30	In Second Floor	23.00	MT	55,900.30	12,85,706.90
15.40	In Third Floor	10.10	MT	56,380.30	5,69,441.03
16.00	Brick work with 1st class bricks in cement mortar (1:6)				
	Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 1, It-4 & analysis				
16.10	In Foundation and Plinth	80.00	Cum	5,367.80	4,29,424.00
16.20	In Super Structure, ground floor	73.00	Cum	5,590.80	4,08,128.40
16.30	In First Floor	42.00	Cum	5,701.80	2,39,475.60
16.40	In Second Floor	42.00	Cum	5,812.80	2,44,137.60
16.50	In Third Floor	27.00	Cum	5,923.80	1,59,942.60
17.00	125 mm. thick brick work with 1st class bricks in cement mortar (1:4) in ground floor				
	Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 3, It-8				
17.10	In Ground floor including roof	451.00	Sqm	728.49	3,28,548.99
17.20	In First Floor	165.00	Sqm	740.49	1,22,180.85
17.30	In Second Floor	165.00	Sqm	752.49	1,24,160.85

18.00	75 mm. thick brick work with 1st class bricks set in cement, sand mortar (1:3) in ground floor including H.B. netting in every alternate layers				
	Ref: PWD Sch(Bldg)2017,3rd corr. Page- 4, It-12 (b)				
18.10	In Ground Floor	14.00	Sqm	550.00	7,700.00
18.20	In First Floor	18.00	Sqm	562.00	10,116.00
18.30	In Second Floor	18.00	Sqm	574.00	10,332.00
19.00	Filling in foundation or plinth by silver sand in layers not exceeding 150 mm as directed and consolidating the same by thorough saturation with water, ramming complete including the cost of supply of sand. (payment to be made on measurement of finished quantity)				
		340.00	Cum	936.21	3,18,311.40
	Ref: PWD Sch(Bldg)2017,Page- 2, It- 4				
20.00	Labour for Chipping of concrete surface before taking up Plastering work				
		4100.00	Sqm	21.00	86,100.00
	Ref: PWD Sch(Bldg)2017,Page- 192, It- B 1				
21.00	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary (Ground floor).[Excluding cost of chipping over concrete surface]				
21.10	With 1:6 cement mortar, 20mm thick				
	Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 50, It-1(i) (b)				
21.11	In Ground floor including roof	1,660.00	Sqm	171.71	2,85,038.60
21.12	In First Floor	771.00	Sqm	175.71	1,35,472.41
21.13	In Second Floor	771.00	Sqm	179.71	1,38,556.41
21.14	In Third Floor	260.00	Sqm	183.71	47,764.60
21.20	With 1:4 cement mortar, 10mm thick				
	Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 50, It-1(ii) (c)				
21.21	In Ground floor including roof	1,652.00	Sqm	130.53	2,15,635.56
21.22	In First Floor	1,000.00	Sqm	134.53	1,34,530.00
21.23	In Second Floor	1,000.00	Sqm	138.53	1,38,530.00
21.24	In Third Floor	417.00	Sqm	142.53	59,435.01

22.00	Supplying fitting and fixing in position approved P.V.C. door frame (Matt finish) made of extruded P.V.C. multichamber hollow section having dimensions 60mm x50mm x 2mm (+/- 0.2mm), horizontal section will be joined with vertical section by galvanised steel screws after inserting two number steel brackets as reinforcement making suitable space for placing hinges, one steel tube 40mm x 20mm x 1.20 mm will be inserted on one full vertical side of the frame (hinge side) as reinforcement, the frame will then be fixed in the opening with the help of P.V.C. expandable fastner/wooden gutties and galvanised steel screws including cost of all materials and labour, hire charges of tools and appliances, carriage of all materials, taxes and all other incidental charges complete. To any floor	30.00	Mtr	279.00	8,370.00
Ref: PWD Sch(Bldg)2017,Page- 117, It- 8					
23.00	PVC Door Shutter-30 mm thick:Supplying fitting and fixing P.V.C. door shutter of approved quality & shade in position, the style & rail of the P.V.C. door shutter will be made of rigid P.V.C. multicavity hollow chamber of suitable size and section with 2.0 mm (+/-0.2 mm) wall thickness, the section will have 2nos. built in beads, horizontal & vertical section shall be fixed to each other by self tapping screws and 2 nos. of solid plastic or M.S. tubular galvanised brackets of length 200mmx80mm and other100mmx100mm both 1.20 mm in each corner of the shutter frame for placing hinges. Polymer based multicavity hollow section of 105 mm x37mm with 2.0 mm (+/- 0.2 mm) wall thickness will be fitted in the middle as lock rail reinforced by solid polymer bar of 200 mm long at both ends abd screws from both sides. The section frame will then be fitted in by PVC panels of size 100 mmx20 mm with wall thickness of 1.2 mm (+/- 0.2 mm) and 2 nos. of 6 mm dia and screws from both sides 6mm dia bright rod will be inserted horizontally with both side check and nut system and stretches where fixing of hinges / hasp bolt /tower bolt / door ring are required to be strong enough to with stand wear and tear. The rate is inclusive of cost of all materials, labour, and hire of tools and plants and appliencies. Carriage of all materials taxes and all other incidental charges complete.The rate is exclusive of cost of hinges, hasp bolt, tower bolt,door ring etc. In any floor	10.00	Sqm	2,127.00	21,270.00
Ref: PWD Sch(Bldg)2017,Page- 135, It- 27					

24.00	<p>Providing and fixing of factory made uPVC Sliding window (White Colour) complete, (U value=1.9-1.3 W/m 2 K, flame resistant, self extinguishing, lead free) comprising uPVC multi-chambered frame having in-built uPVC roller track on top and uPVC sash with wall thickness of 2.3mm (± 0.2 mm) duly reinforced with G.I. section 1.6 mm (± 0.2 mm), wherever required. All corners of frame and sash will be fusion welded.</p> <p>After placing 5 mm Clear Annealed glass in the sash, uPVC glazing bead, interlock, EPDM gasket, brush shall be provided including touch lock and rollers & proper drainage system shall be provided. Window frame will be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per as per approved drawing & direction of Engineer-In-Charge. (Note: Profile manufacturer & Window Manufacturer must be one & same, Only manufacturer Warranty is acceptable</p>				
24.10	2 Track 2 Sash window frame of size 67 x 54 mm & Sash of size 64 x 47 mm both having wall thickness of 2.3 \pm 0.2 mm	85.00	Sqm	7,118.00	6,05,030.00
Ref: PWD Sch(Bldg)2017,Page- 294, It- 24(a)					
25.00	<p>Providing and fixing of factory made uPVC casement window (White Colour) (U value=1.9-1.3 W/m 2 K, flame resistant, self extinguishing, lead free) comprising uPVC multi-chambered frame, Sash, & Mullion with having wall thickness of 2.3 mm (± 0.2 mm) duly reinforced with G.I. section 1.6 mm (± 0.2 mm) made from roll forming process of required length. All corners of frame and sash will be fusion welded. mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's, uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. shall be provided in all frame, sash & mullion, wherever necessary. Thereafter, 5 mm clear annealed glass shall be provided in the sash with the help of uPVC glazing bead and hardware, i.e., stainless steel (SS 304 grade) friction hinges & zinc alloy (white powder coated) casement handles (in window) & 3D Hinges & Multipoint Lock (in door) shall be provided. Window frame shall be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of Engineer-In-Charge. (Note: Profile manufacturer & Window Manufacturer must be one & same, Only manufacturer Warranty is acceptable</p>				

25.10	Fixed Window frame of size 67 x 62 mm & Mullion (if required) of size 67 x 78 mm both having wall thickness of 2.3 ± 0.2 mm	80.00	Sqm	6,054.00	4,84,320.00
Ref: PWD Sch(Bldg)2017,Page- 296, It- 26(C)					
25.20	Extra for providing & fixing insulated 24 mm double glazed unit with 8 mm Air Gap (6 mm Toughened glass + 12 mm spacer + 6 mm Toughened glass) made with 2 no's of toughened glass of 6 mm (wt > 15kg/sq.mtr.) in lieu of single 5 mm Clear Annealed glass, including providing EPDM gasket, perforated aluminum spacer filled with moisture absorbant dessicant at all sides duly sealed with primary sealant (butylene) (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete in all respect as per direction of Engineer - in- Charge.	735.00	Sqm	1,954.00	14,36,190.00
Ref: PWD Sch(Bldg)2017,Page- 296, It- 26 a (d)					
26.00	Supplying profiles of required section made of Aluminium Alloy Extrusion conforming to IS: 732-1983 and IS: 1285-1975; Anodised with required film thickness and specified colour/natural matt finished conforming to IS: 1868-1983 for fabrication of Structural Glazing, Curtain Wall formed of basic sections of any ISI embossed/certified make and brand as per direction of Engineer-in-charge. (Payment will be made on finished length of the work). 15 micron colour anodising Structural glazing /Curtain Wall				
	i) Mulion & Transom (Weight @1.819 Kg per Meter)	1405.00	M	463.00	6,50,515.00
	ii) Sub frame for fixing Glass (Weight @0.31 Kg per Meter)	1405.00	M	81.00	1,13,805.00
Ref: PWD Sch(Bldg)2017,Page- 248, It- 19					
27.00	Labour charge for fabrication and installation of structural Glazing/Curtain Wall made from annodized extruded alloo aluminium sections for the following units:-				
	Structural Glazing made of extruded and annodized alloy aluminium sections, fabrications including cutting to proper shape and size, drilling including cost of brackets, fastener bolt, mullion bolt, nuts & washers,maskin tape, double side adhesieve crosslink foam (used for guard of glazed silicon on sub-frame), tissue paper foam (used as filler between sub-frame and under backing of weather silicon), screws and other necessary hardwares, fixing of glass as per drawing, specification and direction of Engineer-in-Charge. (The rate includes hire charges of all tools and plants, including all incidental charges, adhesieve, joiners such as screw,cleate angle,etc. but excluded the cost of extruded aluminium sections, glass, glazed silicon, weather silicon etc.)	735.00	Sqm	850.00	6,24,750.00
Ref: PWD Sch(Bldg)2017,Page- 249, It- 23					

28.00	<p>Providing and fixing of factory made uPVC Sliding Door (White Colour) complete, (U value=1.9-1.3 W/m 2 K, flame resistant, self extinguishing, lead free) comprising uPVC multi-chambered frame having in-built uPVC roller track on top and uPVC sash extruded profiles with wall thickness of 2.3mm (± 0.2 mm) duly reinforced with G.I. section 1.6 mm (± 0.2 mm), made from roll forming process of required length (shape & size according to uPVC profile) wherever required. Profile of frame & sash shall be mitred cut and fusion welded at all corners, including drilling of holes for fixing hardware's and drainage of water etc. After placing 5 mm Clear Annealed glass in the sash, appropriate dimension uPVC extruded glazing bead, uPVC extruded interlock and uPVC extruded Inline sash adaptor (if required), EPDM gasket, wool pile, zinc alloy (white powder coated) handle with key on one side of extreme panels along with zinc plated mild steel multi point locking having transmission gear with keeps and stainless steel (SS 304 grade) body with adjustable double nylon rollers (weight bearing capacity to be 120 kg). Door frame will be fixed to the wall with 100mm long and 8mm dia. fasteners and necessary stainless steel screws etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of Engineer-in-Charge. (Note: Profile manufacturer & Door Manufacturer must be one & same, Only manufacturer Warranty is acceptable</p>				
28.10	3 Track 3 Sash door frame of size 122 x 54 mm & Sash of size 85 x 47 mm both having wall thickness of 2.3 ± 0.2 mm	120.00	Sqm	7,779.00	9,33,480.00
Ref: PWD Sch(Bldg)2017,Page- 295, It- 25(b)					

29.00	Providing and fixing of factory made uPVC Louver window (White Colour) (U value=1.9-1.3 W/m ² K, flame resistant, self extinguishing, lead free) comprising of uPVC multi-chambered with wall thickness of 2.3mm (±0.2 mm) duly reinforced with 1.6 mm (±0.2 mm) thick G. I. Section made from roll forming process of required length (shape & size according to uPVC profile). Profile of frame & sash shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. Both vertical sides of the frame, adjustable louver mechanism having one lever shall be fitted with the provision of 4 mm glass. Window frame will be fixed to the wall with 100mm long and 8mm dia for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Fasteners and after fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per as per approved drawing & direction of Engineer-in-Charge. (Note: Profile manufacturer & Window Manufacturer must be one & same, Only manufacturer Warranty is acceptable)				
29.10	Louver Window with provision of Exhaust Fan frame of size 67 x 62 mm & Sash / Mullion of size 67 x 78 mm both having wall thickness of 2.3 ± 0.2 mm	6.00	Sqm	7,149.00	42,894.00
	Ref: PWD Sch(Bldg)2017,Page- 298, It- 27(a)				
29.20	Louver Window (Adjustable Louver Only) frame of size 67 x 62 mm both having wall thickness of 2.3 ± 0.2 mm	252.00	Sqm	6,812.00	17,16,624.00
	Ref: PWD Sch(Bldg)2017,Page- 298, It- 27(b)				
30.00	Supplying bubble free float glass of approved make and brand conforming to IS: 2835-1987				
	Ref: PWD Sch(Bldg)2017,Page- 243, It-9(i)				
30.10	4mm thick clear glass	65.00	Sqm	398.00	25,870.00
31.00	Wood work in door and window frame fitted and fixed in position complete including a protective coat of painting at the contact surface of the frame excluding cost of concrete, Iron Butt Hinges and M.S clamps. (The quantum should be corrected upto three decimals). (a) Sal : Local.	1.1	Cum	77,671.00	85,438.10
	Ref: PWD Sch(Bldg)2017, Page- 114, It-1 (d)				
32.00	Panel shutters of door and window, as per design (each panel consisting of single plank without joint), including fitting and fixing the same in position but excluding the cost of hinge and other fittings.In ground floor.				
32.10	Sishu, Gamar, Champ,Badam,Bhola, Mogra, Hallak.				
32.11	40mm thick shutters with 19mm thick panel of size 30 to 45 cm	38	Sqm	3,143.00	1,19,434.00
	Ref: PWD Sch(Bldg)2017, P- 117, It-1 (ii) b				

33.00	M.S.or W.I. Ornamental grill of approved design joints continuously welded with M.S, W.I. Flats and bars of windows, railing etc. fitted and fixed with necessary screws and lugs in ground floor. (a) Grill weighing above 10 Kg./sq.mtr and up to 16 Kg./sq. mtr				
	Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 104, It-13				
33.10	In Ground floor	42.00	Qntl	9,888.00	4,15,296.00
33.20	In First floor	243.00	Qntl	9986.88	24,26,811.84
33.30	In Second Floor	243.00	Qntl	10086.75	24,51,080.25
33.40	In Third Floor	35.00	Qntl	10187.62	3,56,566.70
34.00	Supplying, fitting and fixing Stainless Steel railing consist of 38mm dia and 900mm height vertical balustrade at every two alternative steps, 50mm dia top rail, 3 (three) nos 19mm dia horizontal Strainless steel pipe and base/cover plate with Strainless Steel GRADE 304 containing 7.5% nickle (Interior Grade) Brushed/Mat finish, complete as per direction of the Engineer-in-charge. Weight of Strainless Steel railing per metre 6.5 Kg (approx)	92.00	Mtr	9077.00	8,35,084.00
	Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 95, It-19				
35.00	Supplying, fitting and fixing steel rolling shutter profile type with 18 B.G . of approved type steel latch section 75mm wide, fitted with coil wire spring to necessiate the fitting of required Nos. of C.I. Pulleys on heavy type solid drawn seamless steel tube complete with locking arrangements both inside and outside specially builtup side guide channels including providing a hood for the steel rolling shutter in the room, painting two coats of approved aluminium paint over a coat of red lead primer complete.	71.00	Sqm	3,270.00	2,32,170.00
	Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 92, It-16 (a)				
36.00	Supplying Aluminium casted body Butt Hinge (KOBRA type). (Natural white)	168.00	Each set	56.00	9,408.00
	Ref: PWD Sch(Bldg)2017, P- 244, It- 13D				
37.00	Supplying Aluminium casted body hydraulic door closer as per I.S.I.				
	Ref: PWD Sch(Bldg)2017, P- 244, It- 13A	12.00	Each	635.00	7,620.00
38.00	Anodised aluminium barrel / tower / socket bolt (full covered) of approved manufactured from extruded section conforming to I.S. 204/74 fitted and fixed with cadmium plated screws:	84.00	Each	84.00	7,056.00
	Ref: PWD Sch(Bldg)2017, P- 144, It- 26(vii)				
39.00	Anodised aluminium Aldrop / Sliding bolts of approved quality manufactured from extruded section conforming to I.S. specification (I.S. 2681/66) fitted and fixed complete	4.00	Each	297.00	1,188.00
	Ref: PWD Sch(Bldg)2017, P- 145, It- 28(iv)				
40.00	Anodised aliminium D-type handle of approved quality manufactured from extruded section conforming to I.S. specification (I.S. 230/72) fitted and fixed complete				

40.10	With continuous plate base (Hexagonal/ Round rod). 150 mm grip x 10 mm dia rod.	84.00	Each	97.00	8,148.00
	Ref: PWD Sch(Bldg)2017, P- 145, It- 30(vi)				
41.00	Supplying 'Godrej' mortice lock chromium plated with keys 6 levers including fitting & fixing complete	27.00	Each	1954.00	52,758.00
	Ref: PWD Sch(Bldg)2017, P- 143, It- 16(b)				
42.00	Door stopper (Anodised aluminium)	42.00	Each	70.00	2,940.00
	Ref: PWD Sch(Bldg)2017, P- 143, It- 19(ii)				
43.00	Supplying, fitting and fixing M.S. clamps for door and window frame made of flat bent bar, end bifurcated with necessary screws etc. by cement concrete(1:2:4) as per direction. (Cost of concrete will be paid separately) (a) 40mm X 6mm, 250mm Length				
	Ref: PWD Sch(Bldg)2017,Page- 140, It- 4 (a)				
44.00	Supplying, fitting and fixing fibre reinforced polymer (FRP) Composite door frame as per approved section with glass fibre reinforced plastic moulded skins and a special sandwich core, so as to impart monolithic composite structure as per approved technology of Department of Science and Technology (DST) to satisfy IS: 4020 door testing performance criteria				
44.10	(i) 66mm x 90mm				
	Ref: PWD Sch(Bldg)2017,Page- 115, It- 3 (i)	17.00	M	497.00	8,449.00
45.00	Supplying, fitting & fixing fibre reinforced polymer (FRP) Composite door shutters as per approved design with glass fibre reinforced plastic moulded skins and a special sandwich core, so as to impart monolithic composite structure as per approved technology of Department of Science and Technology (DST) to satisfy IS:4020 door testing performance criteria. In ground floor.				
45.10	32 mm thick				
45.11	In Ground floor	3.00	Sqm	2,763.00	8,289.00
45.12	In First floor	3.00	Sqm	2,777.00	8,331.00
45.12	In Second Floor	3.00	Sqm	2,791.00	8,373.00
	Ref: PWD Sch(Bldg)2017,Page- 125, It- 14 (i)				
46.00	Wood work in posts, post plates, rafters, battens, truss members, purlins etc. fitted and fixed complete (excluding the cost of bolts, paints, but including the cost of nails, screws etc.) (The quantum should be corrected upto three decimals)				
46.10	Dressed wood work in post , plate , battens . etc. fitted & fixed complete (excluding the cost of bolts only, but including the cost of nails, screws etc.) (The quantum should be corrected upto three decimals)				
46.11	Sal : Siliguri	8.00	Cum	1,02,873.00	8,22,984.00
	Ref: PWD Sch(Bldg)2017,Page- 135, It- 1(B) (i)				

47.00	M.S. structural works in columns, beams etc. with simple rolled structural members (e.g. joists, angle, channel sections conforming to IS: 226, IS: 808 & SP (6)- 1964 connected to one another with bracket, gussets, cleats as per design, direction of Engineer-incharge complete including cutting to requisite shape and length, fabrication with necessary bolting, metal arc welding conforming to IS: 816- 1969 & IS: 1995 using electrodes of approved make and brand conforming to IS:814- 2004, haulage, hoisting and erection all complete. The rate includes the cost of rolled steel section, consumables such as electrodes, gas and hire charge of all tools and plants and labour required for the work including all incidental chages such as electricity charges, labour insurance charges etc.				
	Payment to be made on the basis of calculated weight of structural members only in finished work as per IS specified weight. Payment for gusset, bracket, cleat, rivets, bolts and nuts may be make by adding the actual weight of such items with the weight of finished structural members or 7% of weight for finished structural members weighing not less than 22.5 Kg. / m. or 15 % of weight for finished structal members weighing less than 22.5 Kg. / m. may be increased allow for bracket, cleat, rivet, bolts and nuts etc. and no seperate payment being made for these items, as per direction of Engineer InCharge. The rates are considered for a height of erection 8m. / 2nd floor level from the ground. Add 1.5% extra over the rate for each additional floor or 4m. beyond initial 8m. or part thereof.				
	Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 86, It-3 (ii)				
47.10	For structural members of specified sections weighing less than 22.5 Kg./m				
47.11	In Ground Floor & First floor	10.00	MT	72,603.00	7,26,030.00
48.00	Providing and fixing exterior quality Aluminium Composite Panel (ACP) wall cladding on existing Al. /MS frame work with GI brackets, ACP fixed on the existing frame work by folding the edges of ACP panel (Engraving the rear surface of ACP sheet) with CP angles, cleats and strainless Steel screws forming groves at the periphery of ACP panel. Such grooves filled with foam and silicon sealant etc. complete with all materials (but including the cost of silicon sealant), labour, scaffolding and all other incidental charges complete in all respect as per specification and direction of Engineer-in-charge. (Mode of payment is on finished surface area of ACP				
48.10	4mm thick (0.50mm Al.+3.0mm LDPE +0.50mm Al. PVDF coating)	210.00	Sqm	2,878.00	6,04,380.00
	Ref: PWD Sch(Bldg)2017,Page- 250, It- 27(B)				
49.00	Ordinary Cement concrete (mix 1:1:2) with graded stone chips (6mm nominal size) excluding shuttering and reinforcement,if any, in gound floor as per relevant IS codes	10.00	Cum	3,235.00	32,350.00
	Analysed Rate				

50.00	Supplying fitting and fixing I.R.C. fabric mesh with covering battens including cost of screws etc complete (excluding the cost of battens). In ground floor				
50.10	(a) 50mm x 25mm x 2.7mm x 2.7mm	31.00	Sqm	237.00	7,347.00
	Ref: PWD Sch(Bldg)2017,Page- 139, It- 12 (a)				
51.00	Artificial stone in floor, dado, staircase etc with cement concrete (1:2:4) with stone chips, laid in panels as directed with topping made with ordinary or white cement (as necessary) and marble dust in proportion (1:2) including smooth finishing and rounding off corners including raking out joints or roughening of concrete surface and application of cement slurry before flooring works using cement @ 1.75 kg/sq.m all complete including all materials and labour. In ground floor. 3 mm. thick topping (High polishing grinding on this item is not permitted with ordinary cement). Using grey cement. (a)35mm thick.				
	Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 23, It-4 (iii) & Analysis				
51.10	In Ground floor	425.00	Sqm	327.16	1,39,043.00
51.20	In Third floor	85.00	Sqm	344.64	29,294.40
52.00	Supplying and laying true to line and level Double Charge Vitrified Tiles of approved brand conforming to IS 15622: 2006 (Group B I a) and tested as per IS 13630:2006 (relevant parts) [Non-modular sizes for tiles with Water Absorption (av.) ≤ 0.08 %] in floor, skirting etc. using polymerised adhesive of 6mm thick layer applied directly over finished artificial stone floor/Mosaic etc without any backing course and joints grouted with admixture of white epoxy grout materials of approved brand including spacer -2mm as directed and removal of wax coating of top surface of tiles with warm water and polishing the tiles using soft and dry cloth upto mirror finish complete including the cost of materials,labour and all other incidental charges complete as per direction of Engineerin-Charge. (Note: This work should not be executed without specific permission of Superintending Engineer)				
52.10	In Ground Floor:(size not less than 800mmX 800 mm X 10.2 mm thick)				
	Ref: PWD Sch(Bldg)2017,Page- 69, It- 41(b)				
52.11	In Ground floor	675.00	Sqm	2613.00	17,63,775.00
52.12	In First Floor	543.00	Sqm	2,625.00	14,25,375.00
52.13	In Second floor	543.00	Sqm	2,637.00	14,31,891.00
	Ref: PWD Sch(Bldg)2017, Page-192, It-15				

53.00	Supplying and laying true to line and level Anti-Skid, Full Body, Homogeneous & Granular finish Vitrified Tiles conforming to IS:15622-2006 & IS 4457-2007 and testing shall be made in accordance with IS:13630 [Non- modular sizes for tiles with Skid resistance > 0.5, Mohr's hardness > 5.0, Staining resistance: Class-1, Water Absorption: E < 0.5%], MOR > 35 N/sq.mm in Internal area of building e.g. Toilet Block, Passage, Corridor, Accessible Open Terrace etc. set in 20 mm sand cement mortar (1:4) and 2 mm thick cement slurry at back side of tiles using cement @ 2.91 Kg./Sqm or using Polymerised Adhesive (6 mm thick layer applied directly over finished artificial stone floor/ Mosaic etc without any backing course) laid after application slurry using 1.75 Kg of cement per Sqm below mortar only, joints grouted with admixture of white cement and colouring pigment to match with colour of tiles/ epoxy grout materials of approved make as directed and removal of wax coating of top surface of tiles with warm water and polishing the tiles using soft and dry cloth upto mirror finish complete including the cost of materials, labour and all other incidental charges complete true to the manufacturer's specification and direction of Engineer-in-Charge. (White cement, synthetic adhesive and grout material to be supplied by the contractor).				
53.10	In Ground Floor: Sizes-600 mm x600mm x10 mm with breaking strength >1500 N				
	Ref: PWD Sch(Bldg)2017, Page-280, It-1				
53.11	In Ground floor	36.00	Sqm	1,580.00	56,880.00
53.12	In First Floor	36.00	Sqm	1,592.00	57,312.00
53.13	In Second floor	36.00	Sqm	1,604.00	57,744.00
54.00	Supplying, fitting & fixing granite slabs 15mm to 18 mm. thick with uniform texture & without decorative veins in columns, wall, facia, rise etc. with 15 mm thick [avg] cement mortar (1:2) including making suitable arrangements to hold the stones properly by brass / copper hooks including pointing in cement mortar (1:2) (1 white cement : 2 marble dust) with admixture of pigment matching the stone shades all complete as per direction of the Engineer-in-charge including cost of all materials, labours, scaffolding, staging, curing and roughening of concrete surface complete. [Using cement slurry at back side of granite @ 4.4 kg/sq.m & white cement slurry for joint filling @ 1.8 kg/sq.m] In ground floor				
54.10	Area of each Granite slab above 1.00 Square meter				
54.11	In Ground floor	250.00	Sqm	3182.00	7,95,500.00
54.12	In First Floor	92.00	Sqm	3194.00	2,93,848.00
54.13	In Second floor	92.00	Sqm	3206.00	2,94,952.00
54.14	In Third floor	6.00	Sqm	3218.00	19,308.00
	Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 34, It-20 (ii)				
55	Extra cost of labour for prefinished and premoulded Nosing to treads of steps, railing, window sill etc. of Granite Slab	291.00	Mtr	224.00	65,184.00
	Ref: PWD Sch(Bldg)2017, Page- 54, It- 18 & analysis				

56.00	Providing and fixing Heat Resistant Terrace Tiles (300mm X 300mm X 20mm) with SRI (solar refractive index) > 78, solar reflection > 0.70 and initial emittance > 0.75 on waterproof and sloped surface of terrace, laid on 20 mm thick cement sand mortar in the ratio of 1:4 (1 cement : 4 coarse sand) and grouting the joint with mix of white cement & marble powder in ratio of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150 mm height along the parapet walls in the same manner.	510.00	Sqm	1106.00	5,64,060.00
Ref: PWD Sch(Bldg)2017,Page- 294, It- 23					
57.00	Supplying, fitting & fixing 1st quality Ceramic tiles in walls and floors to match with the existing work & 4 nos. of key stones (10mm) fixed with araldite at the back of each tile & finishing the joints with white cement mixed with colouring oxide if required to match the colour of tiles including roughening of concrete surface, if necessary or by synthetic adhesive & grout materials etc				
57.10	On Wall . (a) With Sand Cement Mortar (1:3) 15 mm thick & 2 mm thick cement slurry at back side of tiles using cement @ 2.91 Kg/Sq.m & joint filling using white cement slurry @ 0.20kg/Sq.m. (a) Area of each tile above 0.09 Sq.m (i) Coloured decorative				
Ref: PWD Sch(Bldg)2017,3rd Corrigenda Page- 35, It-22 B (b) (i) and Analysis					
57.11	In Ground floor	225.00	Sqm	1102.40	2,48,040.00
57.12	In First Floor	90.00	Sqm	1107.40	99,666.00
57.13	In Second Floor	90.00	Sqm	1112.40	1,00,116.00
58.00	W.I. or M.S. wheel or roller of steel door or gate fitted and fixed with necessary clamps and nuts and bolts and erected complete.				
58.10	Above 50mm				
Ref: PWD Sch(Bldg)2017,Page- 112, It- 19 analysis					
59.00	Rendering the surface of walls and ceiling with white cement based wall putty of approved make and brand(1.5mm thick)				
Ref: PWD Sch(Bldg)2017,Page- 198, It- 5					
59.10	In Ground Floor	2,100.00	Sqm	122.00	2,56,200.00
59.20	In First Floor	1,850.00	Sqm	122.72	2,27,032.00
59.30	In Second Floor	1,850.00	Sqm	123.44	2,28,364.00
59.40	In Third Floor	670.00	Sqm	124.16	83,187.20
60.00	Applying Exterior grade Acrylic primer of approved quality and brand on plastered or concrete surface old or new surface to receive decorative textured (matt finish) or smooth finish acrylic exterior emulsion paint including scraping and preparing the surface throughly, complete as per manufacturer's specification and as per direction of the EIC. In Ground Floor: (a) Two Coat				

	Ref: PWD Sch(Bldg)2017,Page- 196, It- 8(b)(ii) & P-198, It.-1				
60.10	In Ground floor	490.00	Sqm	45.10	22,099.00
60.20	In First Floor	80.00	Sqm	45.81	3,664.80
60.30	In Second Floor	80.00	Sqm	46.52	3,721.60
60.40	In Third Floor	170.00	Sqm	47.23	8,029.10
61.00	Protective and Decorative Textured exterior high class matt finish paint of approved quality, composed of special Tharmoplastic Resin containing fine crystalline additives derive from Granite as per manufacturer's specification and as per direction of EIC to be applied over acrylic primer as required. The rate includes cost of material, labour, scaffolding and all incidental charges but excluding the cost of primer. (a) Two Coats				
	Ref: PWD Sch(Bldg)2017,Page- 197, It-16 8(b)(ii) & P-198, It.-1				
61.10	In Ground floor	490.00	Sqm	101.00	49,490.00
61.20	In First Floor	80.00	Sqm	101.71	8,136.80
61.30	In Second Floor	80.00	Sqm	102.42	8,193.60
61.40	In Third Floor				
62.00	Applying Interior grade Acrylic Primer of approved quality and brand on plastered or concrete surface old or new surface to receive Distemper/ Acrylic emulsion paint including scraping and preparing the surface throughly, complete as per manufacturer's specification and as per direction of the EIC. (In Ground Floor)				
62.10	Solvent based interior grade Acrylic Primer , Two Coats	2540.00	Sqm	48.50	1,23,190.00
	Ref: PWD Sch(Bldg)2017,Page- 195, It-7(ii) (a)				
63.00	Synthetic Distemper to interior wall, ceiling with a coat of solvent based interior grade acrylic primer (as per manufacturer's specification) including cleaning and smoothning of surface. Two Coats	2540.00	Sqm	68.00	1,72,720.00
	Ref: PWD Sch(Bldg)2017,Page- 196, It-11 (a)				

64.00	Providing and fixing of false ceiling with powder coated exposed G.I. grid suspension system (E-Grid U-1520 or equivalent load carrying capacity with mid span deflection not exceeding 1/360 span with hanger spacing of 1200mm c/c) consisting of Main Runner 3600 mm long, Cross Tee 1200 mm / 600 mm long and Wall Angle. The Wall Angle shall be fixed on PVC Dash Fasteners on the perimeter of the wall by steel screws with distance 300mm c/c. The Main Runners to be placed @ 1200 mm. The Cross Tee 1200mm will be inserted in the pre-cut slots of Main Runner at a regular interval of 600 mm to form a modular grid of 1200mm X 600mm. Additional Cross Tees of 600 mm shall be placed perpendicular to the Cross Tee 1200 mm long to finally form a grid of 600 mm X 600 mm. Grid of module size 600 mm X 600 mm shall be supported by 6 mm dia G.I. wire from purlins / soffit. 15mm thick OW Acoustic Board (Mineral Fiber Acoustic Ceiling Tiles) of approved pattern and size 595mm X 595mm with NRC value > 0.65 should be placed in the Grid module to form a False Ceiling. All complete as per the drawing & directions of Engineer-in-charge. In ground floor.				
64.10	a) Acoustic False Ceiling (with 15mm thick OW Acoustic Board and E-Grid U-1520).				
	Ref: PWD Sch(Bldg)2017,Page- 162, It- 6& P-182, It-4				
64.11	In Ground Floor	410.00	Sqm	1,357.00	5,56,370.00
64.12	In First floor	410.00	Sqm	1,357.00	5,56,370.00
64.13	In Second Floor	410.00	Sqm	1,357.00	5,56,370.00
65.00	Priming one coat on steel or other metal surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc	1020.00	Sqm	29.00	29,580.00
	Ref: PWD Sch(Bldg)2017,Page- 200, It- 1 (a)				
66.00	Priming one coat on timber or plastered surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc	1570.00	Sqm	38.00	59,660.00
	Ref: PWD Sch(Bldg)2017,Page- 200, It- 1 (b)				
67.00	Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface, if necessary				
67.10	a) With super gloss (hi-gloss), with any shade except white & black . 2 Coats				
67.11	On steel or other metal surface : With super gloss (hi-gloss). Two coats (with any shade except white	1020.00	Sqm	79.00	80,580.00
	Ref: PWD Sch(Bldg)2017,Page- 200, It- 2 (b) (iv)				
67.12	On timber or plastered surface : With super gloss (hi-gloss). Two coats (with any shade except white	1570.00	Sqm	81.00	1,27,170.00
	Ref: PWD Sch(Bldg)2017,Page- 200, It- 2 (a) (iv)				

68.00	Supplying & laying as per IRC-SP:063-2004 paver unit of any shade of approved quality as per relevant IS code,laid in pattern as directed in pavement, footpath, driveway(paver block only), etc including necessary underlay complete in all respect with all labour and material. [Border concrete if necessary to be paid separately]. Note: Sub-grade CBR should not be less than 5.				
68.10	60 mm thick interlocking designer concrete paver block M-35 grade for light-traffic zone, commercial & office complex, tourist resort as per IS: 15658-2006 (over 20-40 mm medium sand bed on 250mm thk WBM/ WMM base course & 250 mm thk bound gnular /granular sub-base course & filling the interstices of blocks with fine sand by brooming & subsequent watering complete, including cost of sand but excluding cost of base, sub-base course & subgrade preparation) complete as per direction of Engineer-in-Charge.				
	Ref: PWD Sch(Bldg)2017,12th Corrigenda Page- 3,	102.00	Sqm	1,153.00	1,17,606.00
B. SANITARY AND PLUMBING WORKS					
69.00	Labour for fitting and fixing high density poly-ethylene pipes or P.V.C. pipes for above ground work including cost of jointing materials paints etc. fitting and fixing all necessary specials, cutting pipes, making threads, cutting holes in walls or R.C. floor where necessary and mending good all damages excluding the cost of masonry or concrete work, if necessary, but including the cost and fitting and fixing holder bat clamps(any floor) or for underground work including cutting trenches upto 1.5 metre and refilling the same complete as per direction of the Engineer-in-charge. (Payment will be made on centre line measurement of the total pipeline including specials.)				
	Ref: PWD Sch(S & P)2017,Page- 11, It-18				
69.10	Above Ground				
	Ref: PWD Sch(S & P)2017,Page- 11, It-18(A)				
69.11	15mm Dia	33.00	Mtr	26.00	858.00
69.12	20mm dia	48.00	Mtr	27.00	1,296.00
69.13	25mm dia	296.00	Mtr	28.00	8,288.00
69.14	40mm Dia	128.00	Mtr	37.00	4,736.00
69.15	50mm dia	102.00	Mtr	40.00	4,080.00

70.00	Supplying, fitting and fixing CPVC (Chlorinated Polyvinyl Chloride) pipes of approved make conforming to IS-15778: 2007 . with all necessary accessories, specials viz. socket, bend, tee, union, cross, elbo, nipple,longscrew, reducing socket, reducing tee, short piece etc. fitted with holder bats clamps, including cutting pipes, fitting, fixing etc. complete in all respect including cost of all necessary fittings as required, jointing materials in any position above ground. (Payment will be made on the centre line measurements of total pipe line including all specials. No separate payment will be made for accesories, specials . CPVC Pipes Class-1,SDR-11				
70.10	For Concealed Work				
	Ref: PWD Sch(S & P)2017,Page- 29, It-1(b)				
70.11	15mm dia	33.00	Mtr	140.00	4,620.00
70.12	20mm dia	48.00	Mtr	171.00	8,208.00
70.13	25mm dia	296.00	Mtr	235.00	69,560.00
70.20	For Exposed Work				
	Ref: PWD Sch(S & P)2017,Page- 29, It-1(a)				
70.21	40mm Dia	128.00	Mtr	403.00	51,584.00
70.22	50mm dia	102.00	Mtr	658.00	67,116.00
71.00	Supplying, fitting and fixing gunmetal wheel valve of approved brand and make tested to 21 kg per sq. cm. (for water lines only).				
	Ref: PWD Sch(S & P)2017,Page- 5, It-5				
71.10	20mm dia	15.00	Each	604.00	9,060.00
71.20	25mm dia	33.00	Each	778.00	25,674.00
71.30	40mm Dia	16.00	Each	1590.00	25,440.00
71.40	50mm dia	7.00	Each	2277.00	15,939.00
72.00	Chromium plated Bib Cock short body (Equivalent to Code No. 511 & Model - Tropical / Sumthing Special of ESSCO or similar brand).	22.00	Each	539.00	11,858.00
	Ref: PWD Sch(S & P)2017,Page- 6, It-7 a (i)				
73.00	Chromium plated Stop Cock (Equivalent to Code No. 513(A) & 513(B) & Model - Tropical / Sumthing Special of ESSCO or similar	45.00	Each	493.00	22,185.00
	Ref: PWD Sch(S & P)2017,Page- 6, It-7 b (i)				
74.00	Suppling, fitting and fixing Wall mounted water closet of white glazed vitreous chinaware of approved make and brand in position complete with necessary nut and boalts (Equivalent to Code No. 20061 or 92065 & Model Studio or Rubbic of Hindware or equivalent.)	18.00	Each	3,988.00	71,784.00
	Ref: PWD Sch(S & P)2017,Page- 79, It-5				
75.00	Supplying, fitting and fixing 10 litre porcelain low-down cistern of approved make with either side or bottom inlet, side overflow, brackets complete with all internnal PVC fittings. Matt/Gloss, white.	18.00	Each	1,015.00	18,270.00
	Ref: PWD Sch(S & P)2017,Page- 36, It-2				

76.00	Supplying, fitting and fixing Closet seat of approved make with lid and C.P. hinges, rubber buffer and brass screws complete.				
	(a) E.W.C., Bestolite (solid type) black	18.00	Each	535.00	9,630.00
	Ref: PWD Sch(S & P)2017,Page- 81, It-10 (a) iii				
77.00	Supplying, fitting and fixing glass shelf with aluminium guard rails.				
77.10	Ordinary type with 5.5 mm sheet glass . (i) 450 mm X 125 mm	18.00	Each	341.00	6,138.00
	Ref: PWD Sch(S & P)2017,Page-81, It-16 (i)				
78.00	Supply of UPVC pipes (B Type) & fittings conforming to IS-13592-1992				
	Ref: PWD Sch(S & P)2017,P- 68, It-23				
78.10	Single Socketed 3 Meter Length, 110mm dia	330.00	Mtr	292.00	96,360.00
	Ref: PWD Sch(S & P)2017,Page- 68, It- 32A (i) (b)				
78.20	Door Tee. 110mm dia	138.00	Each	195.00	26,910.00
	Ref: PWD Sch(S & P)2017,Page- 70, It- 32B (iii) (b)				
78.30	Door Bend (T.S.) 110mm dia	18.00	Each	147.00	2,646.00
	Ref: PWD Sch(S & P)2017,Page- 71, It- 32 B (xi) (b)				
78.40	110 X 110 P Trap	14.00	Each	281.00	3,934.00
	Ref: PWD Sch(S & P)2017,Page- 72, It- 32 B (xxi)				
78.50	Shoe - 110 mm dia	6.00	Each	111.00	666.00
	Ref: PWD Sch(Buldg)2017,Page- 213, It-21(A) (d) (ii)				
78.60	Vent Cowl. 110mm dia	20.00	Each	33.00	660.00
	Ref: PWD Sch(S & P)2017,Page- 71, It-32 B (xv) (b)				
78.70	Pipe Clip. 110 mm dia	120.00	Each	21.00	2,520.00
	Ref: PWD Sch(S & P)2017,Page- 71, It-B (xvi) (c)				
79.00	Labour for fitting and fixing U.P.V.C. pipes for above ground work including cost of jointing materials etc. fitting and fixing all necessary specials, cutting pipes, cutting holes in walls or R.C. floor where necessary and mending good all damages excluding the cost of masonry or concrete work, if necessary, but including the cost and fitting and fixing holder bat clamps (any floor) or for underground work including cutting trenches upto 1.5 metre and refilling the same complete as per direction of the Engineer-in-charge. (Payment will be made on centre line measurement of the total pipeline including specials				
	Above Ground , 110mm dia	327.00	Mtr	57.00	18,639.00
	Ref: PWD Sch(S & P)2017,P- 74, It-24 A (ii)				

80.00	Supplying, fitting & fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610x390x370 mm having pre & post flushing with water (250 ml & 350 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-Charge. (Model: Senso Art of Hindware or similar brand.) [Note: This work should not be executed without specific permission of Superintending Engineer.] (a) 15 mm normal bore				
	Ref: PWD Sch(S & P)2017,P- 83, It-26	18.00	Each	13,215.00	2,37,870.00
81.00	Supplying,fitting and fixing 32 mm dia. Flush Pipe of approved make with necessary fixing materials and clamps complete. i) Polythene Flush Pipe				
	Ref: PWD Sch(S & P)2017,P- 81, It- 11	21.00	Each	155.00	3,255.00
82.00	Supplying, fitting and fixing urinal flush pipe fittings of approved brand.				
82.10	C.P. urinal flush pipe fittings range of one	3.00	Each	414.00	1,242.00
	Ref: PWD Sch(S & P)2017,P- 81, It- 12 (a)				
83.00	Supplying, fitting and fixing White Vitreous China Sink in position on C.I. brackets including two coats of painting of brackets				
83.10	610 mm X 450 mm X 250 mm-				
83.11	Roman brown, Fern green, Misty lilac, Orange, Sienna gold, Silver grey, Sepia, Alpine, Cornil sorvinto blue	15.00	Each	10,890.00	1,63,350.00
	Ref: PWD Sch(S & P)2017,P- 41, It- 5 (ii)				
84.00	Supplying, fitting & fixing chrome plated brass battery based infrared sensor oprated pillar cock , having foam flow technology. (Model: Pillar Sensor Faucet of Hindware or similar brand). [Note: This work should not be executed without specific permission of Superintending Engineer.] - 15mm nominal bore				
	Ref: PWD Sch(S & P)2017,P- 46, It- 24	15.00	Each	6,987.00	1,04,805.00
85.00	Supplying, fitting and fixing complete Bottle waste trap (Heavy Quality) (a) Chromium plated Bottle trap 32 mm with 190 mm long connecting pipe and wall flange (Equivalent to Code No. 545 & Model - Tropical /Sumthing Special of ESSCO or similar brand)				
	Ref: PWD Sch(S & P)2017,P- 44, It- 15	15.00	Each	629.00	9,435.00
86.00	Supplying, fitting and fixing with cement jointing (3:1) salt glazed stoneware pipe including excavation of earth upto 1.50 metre depth in all sorts of soil both mixed or unmixed and refilling (but excluding concreting at bottom and sides).				
86.1	150mm dia	95.00	Mtr	334.00	31,730.00
86.2	225mm dia	17.00	Mtr	528.00	8,976.00
	Ref: PWD Sch(S & P)2017,P- 66, It- 16 (III)				

87.00	Constructing Inspection pit of inside measurement 600mm X 600mm X upto 600mm (depth) with 250 mm thick 1st. class brick work in cement mortar (1:4) on all sides, bottom of the pit consisting of 100 mm thick cement concrete (1:3:6) with stone chips over a layer of jhama brick flat soling, 15 mm thick (1:4) cement plaster to inside walls and out-side walls upto G.L. and 20 mm.thick (1:4) plaster to bottom of the pit,providing necessary invert with cement concrete (1:3:6) with stone chips as per direction, neat cement finishing to entire internal surfaces, including supplying, fitting and fixing one 25 MT load bearing capacity round manhole cover of approved make with 150 mm thick R.C.C. slab (1:1.5:3) with stone chips and necessary reinforcements upto 1.2% and shuttering including 6 mm thick cement plaster (1:4) in all external surfaces of the slab , necessary earthwork in excavation in all sorts of soil, filling sides of the pit with earth and removing spoils after work complete in all respect with all costs of labour and materials. With Pakur variety. (SAIL/TATA/RINL)				
87.10	25 MT load bearing capacity round manhole cover provided with two lifter hooks fitted with matching frame of size Cover: 680 mm X 90 mm Frame: 800 mm X 165 mm opening: 500mm Weight: 196 kg (approx)	22.00	Each	10750.46	2,36,510.12
	Ref: PWD Sch(S & P)2017 P- 91, It- 8(ii) ,& 7th Corrigendum P-1, SI- 1, & Analysis				
87.20	Extra for each additional depth of 150 mm or part thereof beyond initial 600 mm depth	24.00	Each	1515.00	36,360.00
	Ref: PWD Sch(S & P)2017,P- 87, It- 1 (iii)				
88.00	Constructing Inspection pit to a depth of 1.5 metre (inside), 250 mm thick 1st class brick work (1:4) in all sides over a layer of jhama brick soling and 150 mm thick cement concrete with stone chips (1:3:6) including necessary earth work, fitting and fixing approved type S.W. master trap, constructing masonry invert with cement concrete (1:1.5:3) with stone chips, plastering inside and outside (outside upto 300 mm below G.L.) with 20 mm thick cement plastering (1:4) and neat cement punning, including supplying, fitting and fixing one 25 MT load bearing capacity round manhole cover of approved make with R.C.C. slab of 150 mm thick with cement concrete (1:1.5:3) with stone chips including necessary reinforcement (upto 1.2%) and shuttering and necessary corbelling brick work (1:4) so that the R.C.C. cover slab rests 150 mm above adjucent G.L., cement plaster (1:4) 10 mm thick on all external surfaces of the top slab as directed complete in all respect and removal of surplus earth with all costs of labour and materials (excluding the cost of master trap only).				
88.10	900 mm X 750 mm (inside) chamber including fitting and fixing S.W. master trap of 150 mm dia. of approved make . With Pakur variety. (SAIL/TATA/RINL)	14.00	Each	15463.59	2,16,490.26

	Ref: PWD Sch(S & P)2017 P- 87, It- 1(i) ,& 7th Corrigendum P-1, SI- 2 & Analysis				
89.00	Supplying, fitting and fixing in position reinforced cement polymer concrete manhole /gully pit cover with matching frame.As per I.S-12592(M.D)				
89.10	25 MT load bearing capacity round manhole cover provided with two lifter hooks fitted with matching frame of size Cover: 680 mm X 90 mm Frame: 800 mm X 165 mm opening: 500mm Weight: 196 kg (approx)				
	Ref: PWD Sch(S & P)2017,P- 91, It- 8 (ii)	14	Each	3382.00	47,348.00
90.00	Supplying, fitting and fixing S.W. master trap.				
90.10	225 mm X 225 mm	3.00	Each	5720.00	17,160.00
	Ref: PWD Sch(S & P)2017,P- 68, It- 21 (ii)				
91.00	Supplying, fitting and fixing cast iron raised rain proof tank cover 500 mm dia. with locking arrangements (weighing not less than 12 kg).				
	Ref: PWD Sch(S & P)2017,Page- 37, It- 8	5.00	Each	1,263.00	6,315.00
C. SINKING 150MM X 150MM X300MM DIA TUBE WELL					
1.00	Geophysical investigation of the acquifer by electrologging system with all tools and plants as necessary including supply of necessary report	1.00	Test	8,247.00	8,247.00
	Ref: PWD Sch(S & P)2017,Page- 56, It-29				
2.00	Labour for boring through any type of soil for sinking tube well of required dia. with top enlargement by rig boring system etc. including hire charges and labour for rig machine, tools and plants, staging etc. complete and lowering of pipes, strainers, blind pipes etc. complete (a) For depth upto 250 metre for 150 mm dia. Tube well with top enlargement of 300 mm dia.(upto 50 metre.)				
	Ref: PWD Sch(S & P)2017,Page- 51, It-2 (c)				
2.10	(i) First 50 Mtr.	50.00	Mtr.	1,078.00	53,900.00
2.20	(ii)Next 50 Mtr.	50.00	Mtr.	1,066.00	53,300.00
2.30	(iii)Next 50 Mtr.	50.00	Mtr.	1,271.00	63,550.00
2.40	(iv) Rest 100 Mtr.	150.00	Mtr.	1,446.00	2,16,900.00
3.00	Supplying, fibre glass reinforced Epoxy resin slotted of 1 mm slot width in 6.1m length of approved make and as per direction of the Engineer - in -Charge				
3.10	(i) 6.00 mm wall thickness, 150mm dia	61.00	Mtr.	2,449.00	1,49,389.00
	Ref: PWD Sch(S & P)2017,Page- 52, It-7 (b) (i)				
4.00	Supply of PVC pipes & fittings Schedule 80 (medium duty) conforming to ASTM D - 1785 and threaded to match with GI Pipes as per IS : 1239 (Part - I).				
4.10	300mm dia	30.00	Mtr	4,071.00	1,22,130.00
	Ref: PWD Sch(S & P)2017,Page- 14, It-19 (III) (A)				
4.20	150mm dia	153.00	Mtr	1,420.00	2,17,260.00
	Ref: PWD Sch(S & P)2017,Page- 14, It-19 (III) (A)				
4.30	Threaded End Cap				

	Ref: PWD Sch(S & P)2017,Page- 174, It-19 (III) (J)				
4.31	150mm dia	1.00	Each	302.00	302.00
5.00	Supplying M.S. male / female adopter of approved make and brand for coupling of M.S. pipe and fibre glass strainers, as per direction of the Engineer - in - Charge. 150 mm	2.00	Each	3,198.00	6,396.00
	Ref: PWD Sch(S & P)2017,Page- 52, It-8 (ii)				
6.00	Supplying, fitting and fixing heavy type bell mouth reducing socket. 200mmX250mm or 150mm x 300mm	1.00	Each	1,508.00	1,508.00
	Ref: PWD Sch(S & P)2017,Page- 54, It-17 (v)				
7.00	Supply of galvanised iron socket with I.S.I. mark				
7.10	150mm dia	28.00	Each	1,344.00	37,632.00
	Ref: PWD Sch(S & P)2017,Page- 103, It-2(xi)				
8.00	Providing 200 mm centre guide				
	ii) With Clamp	6.00	Per Set	128.00	768.00
	Ref: PWD Sch(S & P)2017,Page- 56, It-28				
9.00	S/F/F 300 M.S. Housing clamp of approved quality	1.00	Per Set	2,235.00	2,235.00
	Ref: PWD Sch(S & P)2017,Page- 56, It-27				
10	Supplying, fitting and fixing G.I. cap at top. (a) 300mm dia	1	Each	723.00	723.00
	Ref: PWD Sch(S & P)2017,Page- 54, It-18 (iv)				
11	Supply, Jointing and Lowering of E.R.W.M.S. black pipe of approved make(heavy quality) as per standard specification having wall thickness not less than 8 mm.including making thread for joining with PVC pipes and 2 coats of anticorrosive paint to outside, complete.				
11.10	300 mm dia	6	Mtr	3,644.00	21,864.00
	Ref: PWD Sch(S & P)2017,Page- 111, It-17 B (ii)and analysis				
12.00	Packing the annular space between the outside of the tube well pipes & strainers and the bore with pea size washed gravel of approved quality having size from 2 mm to 5 mm or the size approved by the Engineer-incharge including cost of all materials labour and equipment complete. Note: Initial 6 m. of Annular space between the housing pipe and the bore should not be shrouded with Pea size gravel to avoid contamination with surface water.	40.00	Cum	2,029.00	81,160.00
	Ref: PWD Sch(S & P)2017,Page- 55, It-24				
13.00	Packing annular space between the outside of the housing pipe and the bore with puddled clay balls of approved size as per direction of the Engineer-in-charge with cost of all materials and labour complete.	20.00	Cum	417.00	8,340.00
	Ref: PWD Sch(S & P)2017,Page- 56, It-25				
14.00	Washing and developing tube well with air compressor pump and engine for 8 (eight) hours continuous pumping per day and last day making arrangements for testing the yield in gallons per hour with 'V' notch with respect to draw down by providing necessary submersible pump including hire and labour charges for all tools and plants and scaffolding as required.	4.00	Day	7,538.00	30,152.00
	Ref: PWD Sch(S & P)2017,Page- 55, It-20				

15.00	Labour for making arrangement for showing verticality test including the cost for hire charges of tools and plants, scaffolding, labour etc. all complete				
	Ref: PWD Sch(S & P)2017,Page- 56, It-22	1.00	L.S	916.00	916.00
16.00	Collecting sample of water for bacteriological and chemical test from any depth at any time during execution of work including hire and labour charges for tools and plants and sterilising the equipments, paying all charges and fees, testing etc. complete in all respect as per direction.				
		1.00	L.S.	1,231.00	1,231.00
	Ref: PWD Sch(S & P)2017,Page- 55, It-23				
			Rs.	Total =	6,44,59,612.69
	Add 18% GST				1,16,02,730.28
	Total with GST				7,60,62,342.97
	Add 1% L.W.C				7,60,623.43
					7,68,22,966.40

**BOQ FOR PROPOSED FOOD COURT AND A.C. RESTAURANT NEAR AQUARIUM AT ZOOLOGICAL GARDEN,
ALIPORE, KOLKATA**

Sl. No	Description of works	Quantity	Unit	Rate (Rs.)	Amount Rs. P
CIVIL WORKS (NON-SCHEDULED ITEMS)					
A. MASONRY WORK					
1.00	Making Partition with 19mm thick High Density Wood Polymer (Composit) Board with stain less steel framing work, cutting to requisite shape and size , as per drawing and direction including supplying and fixing approved brand WPC board and SS clamps, screws etc for fixing with wall and framing works, complete in all respect including labour charges, material cost and implied taxes.				
	In All Floors	75.00	Sqm		0.00
2.00	Supplying, fitting and fixing 19mm thick High Density WPC Door Shutter of approved brand and as per drawing with necessary SS framing work, complete in all respect				
	In All Floors	25.00	Sqm		0.00
3.00	Supplying, fitting and fixing Stainless Steel (Grade-304)post with required SS cleats, flanges, clamps etc as per drawing and direction. (Measurement will be taken on the length of the pipe only, no separate payments will be done for clamps, cleats , flanges etc) (a) 50mm dia x 4.91mm thick				
		70.00	M		0.00
			Rs.	Total =	0.00
	Add 18% GST				0.00
	Total with GST				0.00
	Add 1% L.W.C				0.00
					0.00

PROPOSED THREE STORIED FOOD COURT AND A.C. RESTAURANT NEAR AQUARIUM AT ZOOLOGICAL GARDEN, ALIPORE, KOLKATA

A Electrification & Illumination Work (SCHEDULED ITEMS)						
Sl.No.	Description of Items	Unit	Total Quantity	Rate	Amount	Reference
1	SEC: A LV SWITCHGEAR					
1.1	Supplying and fixing double-door SPN MCB Distribution Board with IP-42/43 protection, concealed in wall after cutting the wall & mending good the damages to original finish incl. Inter connection with suitable size of copper wire and neutral link & provision for earthing attachment. (Legrand or Eqv.)					(Ref.WB PWD SOR, Nov.2017, Page: D-9, 13)
1.1.1	2+12 way (607712)	Nos	4	Rs. 1,757.00	7,028.00	
1.1.2	2+8 way (607711)	Nos	9	Rs. 1,477.00	13,293.00	
1.2	Supplying and fixing double door Horizontal TPN MCB Distribution board with IP-42/43 protection, concealed in wall after cutting the wall & mending good the damages to original finish incl. Inter connection with suitable size of copper wire and neutral link & provision for earthing attachment. (Legrand or Eqv.)					(Ref.WB PWD SOR, Nov.2017, Page: D-10, 14)
1.2.1	6 Way Enclosure (607716)	Nos	4	Rs. 3,504.00	14,016.00	
1.3	Supplying and fixing double door Vertical TPN MCB Distribution board for MCCB incomer with IP-42/43 protection, on angle iron frame on wall & mending good the damages to original finish incl. Inter connection with suitable size of copper wire and neutral link & provision for earthing attachment					(Ref.WB PWD SOR, Nov.2017, Page: D-11, 15)
1.3.1	8 Way VTPN DB (MCCB Incomer) Enclosure (607914) (Legrand)	No.	1	10683.00	10,683.00	
1.3.2	4 Way VTPN DB (MCCB Incomer) Enclosure (607913) (Legrand)	No.	3	8627.00	25,881.00	
1.4	Supplying and fixing 415 V Four Pole MCCB of Breaking capacity 25kA/35kA with fixed thermal and fixed magnetic / adjustable thermal and fixed magnetic setting in existing DBs / enclosure and necessary connection					(Ref.WB PWD SOR, Nov.2017, Page: D-8, 10)
1.4.1	100A 4P MCCB (Legrand)	No.	1	7143.00	7,143.00	
1.4.2	160A 4P MCCB (Legrand)	No.	3	9759.00	29,277.00	
1.5	Supplying and fixing MCB SS enclosure with IP-20/30 protection, powder coated provision for two/four pole MCB, concealed in wall after cutting the wall & mending good the damages to original finish incl. painting, connection & provision for earthing attachment					(Ref.WB PWD SOR, Nov.2017, Page: D-9, 11)
1.5.1	4 Way (Legrand)	No.	2	316.00	632.00	
1.5.2	2 Way (Legrand)	No.	4	270.00	1,080.00	
1.6	Supplying and fixing 240/415 V MCB Isolator on din rail of existing DBs and necessary connection. (Legrand or Eqv.)					(Ref.WB PWD SOR, Nov.2017, Page: D-5, 6)
1.6.1	63 A FP	Nos	3	Rs. 845.00	2,535.00	
1.6.2	40 A FP	Nos	1	Rs. 773.00	773.00	
1.6.3	40 A DP	Nos	12	Rs. 349.00	4,188.00	
1.7	Supplying and fixing 240/415 V MCB of Breaking capacity 10kA & C characteristics on din rail of existing DBs and necessary connection. (Legrand or Eqv.)					(Ref.WB PWD SOR, Nov.2017, Page: D-6, 7)
1.7.1	63 A FP	Nos	5	Rs. 1,830.00	9,150.00	
1.7.2	40 A FP	Nos	1	Rs. 1,830.00	1,830.00	
1.7.3	40 A DP	Nos	16	Rs. 938.00	15,008.00	
1.7.4	6-32 A SP	Nos	93	Rs. 160.00	14,880.00	
1.8	Supplying and fixing Sheet steel Main Switches on flat iron frame on wall					(Ref.WB PWD SOR, Nov.2017, Page: D-6, 7)
1.8.1	30/32 A, 240V DP with fuse on L&N	Each	6	Rs. 1,277.00	7,662.00	

2	SEC: B Supplying & Fixing Wiring Accessories					
2.1	Supplying & Fixing sheet metal inspection box (16 SWG) of the following sizes flushed in wall by housing the same after cutting brick wall incl. making earthing attachment, painting and mending good damages to building works					(Ref.WB PWD SOR, Nov.2017, Page:E-4, 11. b & e)
2.1.1	150 mm x 100 mm x 65 mm	Each	20	Rs. 143.00	2,860.00	
2.1.2	240 mm x 200 mm x 65 mm	Each	10	Rs. 253.00	2,530.00	
2.2	Supply & Fixing bakelite / perspex top cover on existing switch board by Brass screws after making housing for switch by cutting bakelite / perspex cover and making necessary connections as required					(Ref.WB PWD SOR, Nov.2017, Page:E-4, 12. b & e)
2.2.1	150 mm x 100 mm x 65 mm	Each	20	Rs. 42.00	840.00	
2.2.2	240 mm x 200 mm x 65 mm	Each	10	Rs. 80.00	800.00	
2.3	Supplying & Fixing two way CI Round box with cover concealed in ceiling/wall	Each	350	Rs. 32.00	11,200.00	(Ref.WB PWD SOR, Nov.2017, Page:E-6, 20. b)
3	SEC: C Distribution Wiring					
3.1	Distribution wiring in 2 x 22/0.3 (1.5 sqmm) single corestranded 'FR' PVC insulated & unsheathed copper wire(Brand approved by EIC) in 20mm size PVC rigid conduit 'FR' (Precision make), with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire forECC, to light/fan/call bell points with Modular type switch(Brand approved by EIC) fixed on Modular GI switch board with top cover plate and 2 no. suitable size "Ph & N" copperbar & earthing attachment fixed on wall incl. mending gooddamages to original finish.					(Ref.WB PWD SOR, Nov.2017 Page: E-24,1)
3.1.1	Average run 8 mtr	Point	119	Rs. 970.00	1,15,430.00	©
3.1.2	Average run 10 mtr	Point	60	Rs. 1,140.00	68,400.00	(e)
3.1.3	Average run 12 mtr	Point	12	Rs. 1,309.00	15,708.00	(g)
3.2	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required.					(Ref. DELHI SCHEDULE OF RATES (E & M) 2022, Page: 8, 1.55.1)
3.2.1	Average run 3 mtr	Point	230	Rs. 579.46	1,33,276.79	
3.3	Distribution wiring in 1.1 KV grade 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in 20mm size PVC rigid conduit 'FR' (Precision make), with 1.1 KV grade 1 x 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire as ECC, to 6A 3 pin Modular type plug socket & switch (Brand approved by EIC) on 4 Module GI switch board with 3/4 Module top cover plate on wall incl. necy. connection making earthing attachment, painting and mending good damages to building works.					(Ref.WB PWD SOR, Nov.2017 Page: E-24,3)
3.3.1	On Board	Point	21	Rs. 216.00	4,536.00	
3.3.2	Average run 4.5 mtr	Point	13	Rs. 633.00	8,229.00	
3.3.3	Average run 7.5 mtr	Point	10	Rs. 805.00	8,050.00	
3.4	Supplying & Fixing of Box type fan clamp of 150 mm dia & 80 mm depth of 16 SWG CRCA sheet with one end dily sealed by cover, properly welded, incl. S&F 12 mm dia 600 mm long MS rod duly bent by heat treatment at the centre position of rod to grip fan bobbin properly, incl. binding thr rod and fan box with reinforcement by 22 SWG steel binding wire, incl. supplying & covering the box with alkathene sheet, placed in order to prevent concrete from entering the box.	Nos	14	174.00	2,436.00	(Ref.WB PWD SOR, Nov.2017 Page: D-14,31)
3.5	Supply & Fixing 240 V, 25 A, 3 pin Modular type plug socket (Brand approved by EIC), without plug top and switch with 2 Module GI Modular type switch board with top cover plate flushed in wall and making necy. connections with PVC Cu wire and earth continuity wire etc.	Nos	10	Rs. 353.00	3,530.00	(Ref.WB PWD SOR, Nov.2017 Page: E-17, 5.a)

3.6	Supply & Fixing 240 V, 16 A, 3 pin Modular type plug socket (Brand approved by EIC) with 16A Modular type switch, without plug top on 4 Module GI Modular type switch board with top cover plate flushed in wall incl. S&F switch board and cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.	Nos	16	Rs. 456.00	7,296.00	(Ref.WB PWD SOR, Nov.2017 Page: E-18, 9.b)
3.7	Supply & Fixing Telephone socket (RJ11) Modular type (Brand approved by EIC) on existing GI Modular board having top cover plate and making necessary connections as required.	Each	4	96	384.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: E-18, 7.b)
3.8	Supply & Fixing Modular type RJ45 sitable for CAT6 cable (Brand approved by EIC) on existing PVC board and top cover plate on wall and making necessary connections as required	Each	4	107	428.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: E-18, 7.a)
3.9	Supplying & Drawing LAN cable (CAT6) (Brand approved by EIC) in prelaid PVC rigid conduit/ in polythene pipe embeded in wall.	RM	180	28	5,040.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: E-19, 21)
3.10	Supplying & Drawing 2-pair Telephone cables with high density polyethylene insulated solid annealed high conductivity bare copper of dia 0.5mm in prelaid PVC rigid conduit/ in polythene pipe embeded in wall.	RM	180	16	2,880.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: E-19, 22)
3.11	Supplying & Fixing GI Modular Switch Board of the following sizes complete with top cover plate flushed in wall for housing the board after cutting the brick wall incl. making earthing attachment, painting and mending good damages to building works.					
3.11.1	2 Module	Set	18	Rs. 172.00	3,096.00	(Ref.WB PWD SOR, Nov.2017 Page: E-17, 2.a)
3.12	Supply & Fixing 240 V, 3 nos. 16 A, 3 pin Modular type plug socket with 3 nos. 16A Modular type switch (Brand approved by EIC), 20A Modular switch type SP MCB (C-Curve) and Indicator without plug top on 2 row 12 Module GI Modular type switch board with 2 row 12 Module top cover plate flushed in wall incl. S&F switch board and cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.	Set	10	Rs. 1,620.00	16,200.00	(Ref.WB PWD SOR, Nov.2017 Page: E-18, 13)
3.13	Distribution wiring in 1.1 KV single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in 20mm size PVC rigid conduit 'FR' (Precision make) incl. necy. fittings as required					(Ref.WB PWD SOR, Nov.2017, Page:E-14, 1. a)
3.13.1	2 x 22/0.3 (1.5 sqmm) + 1 x 22/0.3 (1.5 sqmm) ECC	RM	180	Rs. 102.00	18,360.00	(i)
3.13.2	2 x 36/0.3 (2.5 sqmm) + 1 x 22/0.3 (1.5 sqmm) ECC	RM	720	Rs. 119.00	85,680.00	(ii)
3.13.3	2 x 56/0.3 (4 sqmm) + 1 x 36/0.3 (2.5 sqmm) ECC	RM	360	Rs. 149.00	53,640.00	(iii)
3.13.4	2 x 84/0.3 (6 sqmm) + 1 x 56/0.3 (4 sqmm) ECC	RM	180	Rs. 193.00	34,740.00	(iv)
3.14	Supplying and Drawing 1.1 KV single core stranded 'FR' PVC insulated & unsheathed single core stranded copper wire (Brand approved by EIC) of the following sizes in the prelaid polythene pipe and by the prelaid GI fish wire and making necy. connection as required					(Ref.WB PWD SOR, Nov.2017, Page:E-9, 1)
3.14.1	4x84/0.3 (6 sqmm) + 2x56/0.3 (4 sqmm) as ECC	RM	50	Rs. 276.00	13,800.00	(a1)
3.14.2	4x80/0.4 (10 sqmm) + 2x84/0.3 (6 sqmm) as ECC	RM	50	Rs. 493.00	24,650.00	(d1)
5	SEC: E Fixing Light Fittings/Others Materials					
5.1	Fixing only bulk head ceiling fitting on wall /ceiling by screws etc at various locations.	Nos	4	Rs. 56.00	224.00	(Ref.WB PWD SOR, Nov.2017 Page: C-2, 13)
5.2	Fixing only single/twin fluorescent light fitting complete with all accessories directly on wall/ceiling by screws etc.	Nos	347	Rs. 86.00	29,842.00	(Ref.WB PWD SOR, Nov.2017 Page: C-2, 14.a)

5.3	Fixing only single/twin florescent light fitting complete with all accessories Directly on wall/ceiling with HW block and suitable size MS fastener, Ceiling plate, nipples etc. as required at various locations.	Nos	43	Rs. 161.00	6,923.00	(Ref.WB PWD SOR, Nov.2017 Page: C-2, 14.d)
5.4	Fixing only ceiling fan complete with blades, canopy, fork, rubber bush etc. incl. S&F connecting wire for down rod upto 30 cm incl. painting the rod with approved paint and making necessary connection as required by 2x1.5 sqmm flexible copper wire at various locations.	Nos	14	Rs. 66.00	924.00	(Ref.WB PWD SOR, Nov.2017 Page: C-3, 21.a)
5.5	Fixing only cabin fan on wall/ceiling by S&F rag bolts, nuts & washers (6 mm dia x 62 mm long) or as reqd. incl. S&F 24/0.20 PVC insulated flexible copper wire 0.5 mt. length	Nos	12	Rs. 92.00	1,104.00	(Ref.WB PWD SOR, Nov.2017 Page: C-4, 29)
5.6	Fixing only exhaust fan after making hole in wall and making good damages and smooth cement finish etc. as practicable as possible and providing necy. length of PVC insulated wire and making connection for exhaust of following diameter:					(Ref.WB PWD SOR, Nov.2017, Page: C4,28.)
5.6.1	23 cm (9")	Nos	6	Rs. 247.00	1,482.00	(a)
5.6.2	30 cm (12")	Nos	12	Rs. 329.00	3,948.00	(b)
5.7	Supply & Fixing GI louver shutter on wall with necy. bolts & nuts (6 mm dia x 62 mm long)					(Ref.WB PWD SOR, Nov.2017 Page: D-14, 30)
5.7.1	For 23 cm (9")	Nos	6	Rs. 82.00	492.00	(a)
5.7.2	For 30 cm (12")	Nos	12	Rs. 110.00	1,320.00	(b)
6	SEC: F: Laying of Cables					
6.1	Laying of cable on wall/surface incl. S & F MS saddles with earthing attachment in 10 SWG GI (Hot Dip) Wire, making holes etc. as necy. mending good damages and painting					(Ref.WB PWD SOR, Nov.2017, Page:F-1)
6.1.1	upto 2 core 25 sqmm	RM	30	Rs. 57.00	1,710.00	Sl. No.-2.a
6.1.2	upto 3/4 core 25 sqmm	RM	150	Rs. 60.00	9,000.00	Sl. No.-2.b
6.1.3	from 3/4 core 35 sqmm upto 3/4 core 50 sqmm	RM	50	Rs. 71.00	3,550.00	Sl. No.-2.c
6.1.4	from 3/4 core 90 sqmm upto 3/4 core 150 sqmm	RM	50	Rs. 86.00	4,300.00	Sl. No.-2.e
6.2	Laying of one No. cable in underground trench 460mm wide x 760mm average depth, with brick protection on the top of the cable with 8 (eight) Nos. bricks per Mtr. including filling the space between the bricks and cable and also the trench with shifted soil, leveling up and restoring surface duly rammed					(Ref.WB PWD SOR, Nov.2017, Page:F-2)
6.2.1	above 35 sq mm upto 185 sqmm	RM	60	Rs. 172.00	10,320.00	Sl. No.-1.b
6.3	Laying of one cable through existing covered masonry trench incl. taking out RC covers, setting them in order, mending good the damages filling the trench with fine dry sand incl. supplying sand					(Ref.WB PWD SOR, Nov.2017, Page:F-3)
6.3.1	upto 150 sqmm	RM	130	Rs. 96.00	12,480.00	Sl. No.-4.a
6.3.2	above 150 sqmm and upto 300 sqmm	RM	140	Rs. 136.00	19,040.00	Sl. No.-4.b
7	SEC: G: Finishing of Cables Ends					
7.1	Supplying and fixing double compression type gland complete with brass gland, brass ring & rubber ring for dust & moisture-proof entry of XLPE/PVC armoured cables as below :					(Ref.WB PWD SOR, Nov.2017, Page:F-4, 7)
7.1.1	For 4 core upto 185 sqmm	Each	4	Rs. 391.00	1,564.00	©
7.1.2	For 4 core upto 150 sqmm	Each	4	Rs. 355.00	1,420.00	©
7.1.3	For 4 core upto 120 sqmm	Each	6	Rs. 307.00	1,842.00	©
7.1.4	For 4 core upto 50 sqmm	Each	2	Rs. 197.00	394.00	©
7.1.5	For 4 core upto 35 sqmm	Each	2	Rs. 162.00	324.00	©
7.1.6	For 4 core upto 16 sqmm	Each	2	Rs. 132.00	264.00	©
7.1.7	For 2 core upto 10 sqmm	Each	2	Rs. 115.00	230.00	©

7.2	Finishing of the XLPE/PVC insulated armoured cable ends by soldering with cable sockets and insulated tapes etc., including supplying sockets, soldering materials, tapes etc. and making connection to switch, BDB and BBC etc.					(Ref.WB PWD SOR, Nov.2017, Page:F-5, 8.b)
7.2.1	For 4 core upto 185 sqmm	Each	4	Rs. 546.00	2,184.00	xxii)
7.2.2	For 4 core upto 150 sqmm	Each	4	Rs. 434.00	1,736.00	xx)
7.2.3	For 4 core upto 120 sqmm	Each	6	Rs. 381.00	2,286.00	xix)
7.2.4	For 4 core upto 50 sqmm	Each	2	Rs. 209.00	418.00	xvi)
7.2.5	For 4 core upto 35 sqmm	Each	2	Rs. 158.00	316.00	xv)
7.2.6	For 4 core upto 16 sqmm	Each	2	Rs. 95.00	190.00	xii)
7.2.7	For 2 core upto 10 sqmm	Each	2	Rs. 34.00	68.00	iii)
8	SEC: H : Earthing					
8.1	Excavation of soil for installation of Earth Electrode and filling & ramming					(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-1, 1.b)
	For Soft Soil	Cu mtr.	36	Rs. 215.00	7,740.00	
8.2	Earthing with 50 mm dia GI pipe 3.64 mm thick x 3.04 Mts.long and 1 x 4 SWG GI (Hot Dip) wire (4 Mts. long), 13 mm dia x 80 mm long GI bolts, double nuts, double washers incl. S & F 15 mm dia GI pipe protection (1 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level driven to an average depth of 3.65 Mts. below the ground level as below					(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-1, 2.a)
	By TATA-Medium GI pipe	Set	12	Rs. 1,524.00	18,288.00	
8.3	Extra for providing masonry enclosure on the top of the earth electrode of overall size 86.36 cm x 86.36 cm x 46 cm deep (below Ground level) complete with cemented brick work(1:6) of 25 cm width duly plastered with cement mortar (inside) CI hinged inspection cover of size 36.56 cm x 35.56 cm with locking arrangement, GI reducer including drilling of 46 nos. 12 mm dia holes on the GI pipe	Item	12	Rs. 915.00	10,980.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-2, 3.a)
8.4	Extra for treatment of soil by using salt & charcoal or coke for plate electrode	Item	12	Rs. 531.00	6,372.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-2, 3.b)
8.5	Supplying & fixing earth busbar of galvanized (Hot Dip) MS flat 25 mm x 6 mm on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc. as required	Mtr	1	Rs. 156.00	156.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-2, 4.a)
8.6	Connecting the equipments to earth busbar including S & F GI (Hot Dip) wire of size as below on wall/floor with staples buried inside wall/floor as required and making connection to equipments with bolts, nuts, washers, cable lugs etc. as required and mending good damages					
8.6.1	No. 8 SWG	Mtr	50	Rs. 9.00	450.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-2, 5.a.iii)
8.7	Connecting the equipments body to earth busbar incl. S & F 25 mm x 6 mm Galvanized (Hot Dip) MS flat on wall/floor with GI saddle as required and connection to equipments with incl. drilling holes, bolts, nuts,washers etc.	Mtr	150	Rs. 138.00	20,700.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-3, 5.d)
9	SEC: I: MISCELLANEOUS ITEM					
9.1	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 from the ceiling with M.S. suspenders including bolts '& nuts, painting suspenders etc as required.					(Ref. DSR (E&M) 2018, Pg.No. 20, 4.1) (Less GST @ 12%)
9.1.1	300 mm width X 50 mm depth X 1.6 mm thickness	Metre	50	544.73	27,236.84	Sl.No.-4.1.4

9.2	Supplying & fixing medium gauge GI Pipe (ISI-Medium) Protection with necessary fittings and jointing materials as required					(Ref.WB PWD SOR, Nov.2017, Pg.No.: F6, 11)
9.2.1	150 mm. (Nominal Bore)	Rm	12	Rs. 1,137.00	13,644.00	(i)
10	SEC: J Supply & Installation of Lightning Arrester					
	Conventional Lighting Protection System as per IS/IEC 62305					
10.1	S & F Lightning conductor Air-terminals made of 15 mm dia 1500 mm long GI Rod having five prongs of 4 SWG GI (Hot Dip) wire at top with 85 mm dia 6 mm thick GI base plate at bottom incl. necessary holes etc. duly grouted on the parapet etc.in CC mortar (4:2:1)(WBPWD-2017,J-1,1)	Each	10	Rs. 428.00	4,280.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: J-1, 1)
10.2	Hiring charges for scaffolding arrangement including dismantling at the end of work and carriage, for LC installation, per storey of building per vertical run(WBPWD-2017,J-1,7)	storey/ vertical run	30	Rs. 155.00	4,650.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: J-1, 7)
10.3	Supply & fixing GI (Hot Dip) strips 20 mm x 3 mm thick for horizontal run on the Parapet/Roof/ Wall with GI Saddles 1100 mm apart incl. mending good the damages to building works(WBPWD-2017,J-1,9)	Mtr	500	Rs. 62.00	31,000.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: J-1, 9)
10.4	Supply & fixing of GI (Hot Dip) strips 20 mm x 3 mm thick for vertical run on wall with GI saddles spaced not exceeding 1000 mm apart incl. mending good damages to building work(WBPWD-2017,J-1,11a)	Mtr	150	Rs. 87.00	13,050.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: J-1, 11.a)
10.5	Making soldered joints between conductor/ down pipes / other metallic objects by 7/10 stranded GI (Hot Dip) wire incl. supply of jointing materials & painting with 2 (two) coats of Bituminous paint(WBPWD-2017,J-1,12b)	No.	200	Rs. 91.00	18,200.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: J-1, 12.b)
10.6	Supply & Fixing of Testing Joints by 20 mm x 3 mm thick GI (Hot Dip) strip 125 mm long grouted on wall having clearance of 6 mm from wall for making connection with thimbles at the end of 7/10 SWG GI (Hot Dip) stranded Wire and 4 SWG GI (Hot Dip) wire of vertical conductor and conductor from earth electrode complete with S & F thimbles, GI bolts, nuts, check-nuts, spring washers etc. as required(WBPWD-2017,J-1,13)	Each	2	Rs. 170.00	340.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: J-1, 13)
10.7	Earthing with 50 mm dia GI pipe 3.64 mm thick x 3.04 Mts. long and 1 x 4 SWG GI (Hot Dip) wire (4 Mts. long), 13 mm dia x 80 mm long GI bolts, double nuts, double washers incl. S & F 15 mm dia GI pipe protection (1 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level driven to an average depth of 3.65 Mts. below the ground level as below: (WBPWD-2017,G-1.2)	No.	2	Rs. 1,524.00	3,048.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-1, 2)
10.8	Extra for providing masonry enclosure on the top of the earth electrode of overall size 86.36 cm x 86.36 cm x 46 cm deep (below Ground level) complete with cemented brick work(1:6) of 25 cm width duly plastered with cement mortar (inside) CI hinged inspection cover of size 36.56 cm x 35.56 cm with locking arrangement, GI reducer including drilling of 46 nos. 12 mm dia holes on the GI pipe.(WBPWD-2017,G-2,3a)	Nos	2	Rs. 915.00	1,830.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-2, 3.a)
10.9	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.(DSR-2018,5.11)	Rmt	50	Rs. 431.25	21,562.50	(Ref.DSR SOR, 2018, Pg.No.: 5, 11) (Less GST @12%)
11	SEC: K: COMPOUND LIGHTING					
11.1	Making M- 20 grade reinforced cement concrete foundation by considering the safe soil bearing capacity as 10 T/sq.m at 1.5 m depth including supply of steel, concrete, excavation, fixing provided nut bolts with the help of template, duly plastered as per design complete (for 3 to 5m octagonal / conical GI pole).	Each	10.00	2,727.00	27,270.00	Maharashtra PWD SOR 2018 - 2019 (P.No-244,S.N.-16-3-8)

11.2	Supplying and Drawing 1.1 KV single core stranded 'FR' PVC insulated & unsheathed single core stranded copper wire (Brand approved by EIC) of the following sizes in the prelaid polythene pipe and by the prelaid GI fish wire and making necy. connection as required					(Ref.WB PWD SOR, Nov.2017, Pg.No.: E-9, C)
11.2.1	3 x 22/0.3 (1.5 sqmm)	Mtr.	50.00	48.00	2,400.00	1.b)
11.3	Façade Lighting					
	Supply, Installation, Testing and Commissioning of LED RGB/RGBW Linaire Wall Washer luminaire for facade lighting with Die-cast aluminium housing, powder-coated finish of following wattage. Luminaire shall be capable of producing dynamic color changing light for with 16 million colors by DMX/Ethernet based control. The beam angle of the fitting shall be narrow, medium, wide or asymmetric as per the requirement. Luminaire shall be complete with driver and capable of operating at line voltage without any separate power supply from 100-270VAC, 50Hz with power factor>0.9. Fixture shall be suitable to operate at an ambient temperature range of -10°C to +50°C and shall be IP65 and IK06 rated. Life time shall be at least L70:50000 burning hours at 50°C. Luminaire shall be conforming to BIS (IS10322) and shall be complete with all necessary accessories required for proper working of fixture including weather proof connection cables, water proof connectors etc. as required.					(Ref. DSR/AOR, Façade Lighting)
11.3.1	40 W	Nos.	34,866.07	10	3,48,660.71	(Less GST @ 12%)
11.4	Laying of one No. cable upto 35 sq.mm. in underground trench 460 mm wide x 760 mm average depth, with brick protection on the top of the cable with 8 (eight) Nos. bricks per metre, including filling the space between the brick & cable and also the trench with shifted soil, leveling up and restoring surface duly rammed	RM	100	162.00	16,200.00	(Ref.WB PWD SOR, Nov.2017, Page:F-2, 1.a)
11.5	Supplying and fixing compression type gland complete with brass gland, brass ring & rubber ring for dust & moisture-proof entry of XLPE/PVC armoured cables as below :					(Ref.WB PWD SOR, Nov.2017, Page:F-4, 7)
11.5.1	For 4 core 10 sqmm	Each	28	132.00	3,696.00	c)
11.6	Finishing of the XLPE/PVC insulated armoured cable ends by soldering with cable sockets and insulated tapes etc., including supplying sockets, soldering materials, tapes etc. and making connection to switch, BDB and BBC etc.					(Ref.WB PWD SOR, Nov.2017, Page:F-5, 8)
11.6.1	For 4 core 10 sqmm	Each	28	67.00	1,876.00	b.xi)
11.7	Excavation of soil for installation of Earth Electrode and filling & ramming.					(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-1, 1.a)
11.7.1	For Soft Soil	Cu mtr.	30.00	215.00	6,450.00	
11.8	Earthing with 50 mm dia GI pipe 3.64 mm thick x 3.04 Mts. long and 1 x 4 SWG GI (Hot Dip) wire (4 Mts. long), 13 mm dia x 80 mm long GI bolts, double nuts, double washers incl. S & F 15 mm dia GI pipe protection (1 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level driven to an average depth of 3.65 Mts. below the ground level as below:					(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-1, 2.a)
11.8.1	By ISI-Medium GI pipe	Each	10.00	1,369.00	13,690.00	
11.9	Extra for providing masonry enclosure on the top of the earth electrode of overall size 86.36 cm x 86.36 cm x 46 cm deep (below Ground level) complete with cemented brick work(1:6) of 25 cm width duly plastered with cement mortar (inside) CI hinged inspection cover of size 36.56 cm x 35.56 cm with locking arrangement, GI reducer including drilling of 46 nos. 12 mm dia holes on the GI pipe	Each	10.00	915.00	9,150.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-1, 2.a)
11.10	Extra for treatment of soil by using salt & charcoal or coke for plate electrode	Each	10.00	531.00	5,310.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-2, 3.a)
11.11	Connecting the equipments body to earth busbar including S&F 20 mm x 3 mm galvanised (Hot Dip) MS flat on wall/floor with GI saddles as required and connection to equipments incl. drilling holes, with bolts, nuts, washers etc.	Mtr.	15.00	92.00	1,380.00	(Ref.WB PWD SOR, Nov.2017, Pg.No.: G-2, 3.b)

11.12	Supplying & fixing medium gauge GI Pipe (ISI-Medium) Protection with necessary fittings and jointing materials as required.					(Ref. WB PWD Schedule, Nov. 2017, Page: F-6, 11.g & h)
11.12.1	50 mm Dia.	Rm	12	330.00	3,960.00	(g)
12 SEC: L: PUMP & CONTROL PANEL						
12.1	Supplying & erecting automatic control panel for 3 Ph, 415 volt, a.c. Submersible/centrifugal pump set upto 20 HP consisting of Star Delta starter having relay range 13-21Amp, S.P.P., Combined ammeter/voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection. Control Panel should offer single phasing, phase reversal, phase imbalance etc. (Make-L&T or eqv.)	No.	1.00	12,342.00	12,342.00	Maharashtra PWD SOR 2018 - 2019 (P.No-220,S.N.-12-4-21)
13 SEC: M: Glow Sign Board.						
13.1	S&F Compression Type brass cable gland as to GS as follows: 2 Core 10 sq.mm. PVC Al. armoured cable	Nos.	4.00	115.00	460.00	(Ref.WB PWD SOR, Nov.2017, Page:F-4, 7.a)
13.2	S&F finishing end of the cable socket by crimping method as to GS as follows: 2 Core 10 sq.mm. PVC Al. armoured cable	Nos.	4.00	34.00	136.00	(Ref.WB PWD SOR, Nov.2017, Page:F-5, 8.b iii)
14 SEC: N: UPS.						
14.1	Supplying & erecting on line UPS pure sine wave of 3 kVA capacity complete with standard features, along with necessary SMF batteries for 30 mins battery backup, as per specification no. AP-UPS	No.	1.00	66,034.00	66,034.00	Maharashtra PWD SOR 2018 - 2019 (P.No-55, S.N.-3-7-3)
TOTAL AMOUNT					16,51,515.84	
Add GST @ 18%					2,97,272.85	
Total Amount					19,48,788.69	
Add Labour Welfare Cess @ 1%					19,487.89	
Total Amount					19,68,276.58	

**PROPOSED THREE STORIED FOOD COURT AND A.C. RESTAURANT NEAR
AQUARIUM AT ZOOLOGICAL GARDEN, ALIPORE, KOLKATA**

A	Electrification & Illumination Work (NON-SCHEDULED ITEMS)			
Sl.No.	Description of Items	Unit	Total Quantity	Amount
1	SEC: A LV SWITCHGEAR			
1.1	Supplying and fixing 415V, RCCB's in MCB enclosure on flat iron/angle iron frame on wall with nuts bolts etc. (Legrand or Eqv.)			
1.1.1	63A FP (100mA)	Each	1	
1.1.2	40A DP (30mA)	Each	12	
2	SEC: B: SUPPLY & DELIVARY OF INDOOR LIGHT/FAN FITTINGS			
2.1	Supply & Delivery of 15 Watt Recessed Round LED Downlight Fittings & Fixing. Similar to Havells Cat No. INTEGRANXTDLRD15WLED840S. (Make - Havells/Crompton/Philips)	Each	146	
2.2	Supply & Delivery of 15 Watt Surfaced Round LED Downlight Fittings & Fixing. Similar to Havells Cat No. INTEGRANXTRDDLRSURD15WLED865S. (Make - Havells/Crompton/Philips)	Each	155	
2.3	Supply & Delivery of 36 Watt 2'x2' Recessed Square LED Panel Light Fittings & Fixing. Similar to Havells Cat No. VENUSNEO2X2PLR36WLED857STTR. (Make - Havells/Crompton/Philips)	Each	46	
2.4	Supply & Delivery of 36 Watt LED Suspended Light Fittings & Fixing. Similar to Havells Cat No. MONDO600RDP/S36WLED857SPSWH (Make - Havells/Wipro/Philips)	Each	6	
2.5	Supply & Delivery of 36 Watt 4 ft. LED Tube Batten Fittings. Similar to Havells Cat No. LUMILINE+XS36WLED865SPCWH (Lumiline X). (Make - Havells/Crompton/Philips)	Each	33	
2.6	Supply & Delivery of 10 Watt compact modern Design utility bulkhead with high energy savings. Similar to Havells Cat No.RUGBYGENXFTS10WLED865SSYMBOLPC. (Make - Havells/Crompton/Philips)	Each	3	
2.7	Supply and delivery of 1400 mm sweep, 1 phase, 60/70 watt, 5 star and having 300 mm down rod, 1.1mm thick alluminium bled, conforming IS 374, 2mm shank thickness ceiling fan. Similar to Orient Model "Summer Breeze Pro". White (Make-Orient/Havells/Crompton)	Each	9	
2.8	Supply and delivery of 1200 mm sweep, 1 phase, 60/70 watt, 5 star and having 300 mm down rod, 1.1mm thick alluminium bled, conforming IS 374, 2mm shank thickness ceiling fan. Similar to Orient Model "Summer Breeze Pro". (Make-Orient/Havells/Crompton), Brown	Each	5	
2.9	Supply & Delivery of fresh air cum exhaust fan of heavy duty 250 V A.C. 50 cycles 300mm. 1400 RPM rust proof body & blades, wire mesh, duly erected in an approved manner. Similar to Orient Model "Power Flow". (Make-Orient/Havells/Crompton)	Each	12	
2.10	Supply & Delivery of fresh air cum exhaust fan of heavy duty 250 V A.C. 50 cycles 225mm. 1400 RPM rust proof body & blades, wire mesh, duly erected in an approved manner. Similar to Orient Model "Hi Speed". (Make-Orient/Havells/Crompton)	Each	5	
2.11	Supply & Delivery of wall fan of A.C. 230 V. 50 cycles 400 mm. sweep complete with necessary brackets for fixing cabin fans, wire etc (400 mm or 16" Wall) (with Plastic Blade & Pull Cord) (Similar to Orient Model-400 mm Tornado Wall 50) (Make-Orient/Havells)	Each	6	

3	SEC: C: SUPPLY & DELIVARY OF LT CABLE			
3.1	<p>4 CORE, 185 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4,Nominal Area of Cross section: 185 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated,Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.</p>	Mtr.	200	
3.2	<p>4 CORE, 150 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4,Nominal Area of Cross section: 150 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated,Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.</p>	Mtr.	150	
3.3	<p>4 CORE, 120 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4,Nominal Area of Cross section: 120 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated,Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.</p>	Mtr.	30	
3.4	<p>4 CORE, 50 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4,Nominal Area of Cross section: 50 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated,Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.</p>	Mtr.	20	
3.5	<p>4 CORE, 35 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4,Nominal Area of Cross section: 35 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated,Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.</p>	Mtr.	30	

3.6	4 CORE, 16 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4, Nominal Area of Cross section: 16 Sq.mm , Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated, Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.	Mtr.	50	
3.7	2 CORE, 10 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 2, Nominal Area of Cross section: 10 Sq.mm , Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated, Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.	Mtr.	30	
3.8	3 C x 1.5 sq. mm. PVC Flexible copper cable. 1.1 kv Gr./ Three Core , Flexible PVC insulated and PVC sheathed cable, nominal cross section are of conductor (Copper) 1.5 sqmm., 1100 Volt Grade ISI marked (conforming to IS- 694)	Mtr.	50	
3.9	3 C x 2.5 sq. mm. PVC Flexible sheathed tinned copper round cable. 1.1 kv Gr./ 3 Core x 2.5 sq. PVC insulated and Sheathed tinned copper Round Flexible wire 1100V /660 V Grade	Mtr.	50	
4	SEC: D: LT DISTRIBUTION PANEL			
4.1	Design, supply, delivery & installation of following types of LT Distribution Panel Board (Cubicle Type) at Electrical Panel/Meter Room fabricated from SS316 grade sheet of 2 mm thick, as per "Technical Specification & Scope of Work".			
4.1.1	MAIN LT DISTRIBUTION PANEL	No.	1	
	Incoming:-			
	500A 4P 36 KA MCCB MP Release with handle & spreader -2 Nos.			
	Supply & delivery of the following Current Transformer (Make: KAPPA/AE): Ratio:- 500/5A - 6 Nos.			
	Multifunction kWh Meter -2 Nos.			
	LED Indication Lamp (R/Y) - 10 Nos.			
	LED Indication Lamp (B) - 2 No.			
	2A SP MCB-3 Nos.			
	Surge Protection Device 15kA Type -2 - 1 No.			
	Outgoing:-			
	400A FP MCCB, 36 kA, TM @ with handle & spreader - 2 Nos.			
	160A FP MCCB, 36 kA, TM @ with handle & spreader - 2 Nos.			
	100A FP MCCB, 36 kA, TM @ with handle & spreader - 2 Nos.			
	63A FP MCCB, 25 kA, TM @ with handle & spreader - 2 Nos.			
4.1.2	METER PANEL- CONSISTING FOLLOWING:-	No.	1	
	Incoming:-			

	400A FP MCCB, 36 kA, TM @ with handle & spreader - 1 No.			
	Supply & delivery of the following Current Transformer (Make: KAPPA/AE): Ratio:- 400/5A - 3 Nos.			
	Multifunction kWh Meter -1 No.			
	LED Indication Lamp (R/Y) - 2 Nos.			
	LED Indication Lamp (B) - 1 No.			
	2A SP MCB-3 Nos.			
	Surge Protection Device 15kA Type -2 - 1 No.			
	Outgoing:-			
	160A FP MCCB, 25 kA, TM @ with handle & spreader - 4 Nos.			
	25A DP MCB, 10 kA- 8 Nos.			
4.1.3	UTILITY PANEL CONSISTING FOLLOWING:-	No.	1	
	Incoming:-			
	63A 4P 25KA MCCB TM Release with handle & spreader -1 No.			
	Supply & delivery of the following Current Transformer (Make: KAPPA/AE): Ratio:- 63/5A - 3 Nos.			
	Multifunction kWh Meter -1 No.			
	LED Indication Lamp (R/Y) - 2 Nos.			
	LED Indication Lamp (B) - 1 No.			
	2A SP MCB-3 Nos.			
	Surge Protection Device 15kA Type -2 - 1 No.			
	Outgoing:-			
	25A FP MCB, 10 kA- 4 Nos.			
5	SEC: E: COMPOUND LIGHTING			
5.1	Supplying & erection of Driveway Lighting Pole of 3.66mtr. height including Bracket, Light Fittings and all accessories as required similar to K-Lite ID KP-4198 "Bishop Driveway Orna SA Lighting Pole".	Each	10.00	
5.2	Supply, delivery at site and fixing of Circular LED post-top offering excellent uniform illumination and aesthetics in one go. Made up of Pressure Die Cast aluminium body and opal PC cover. IP 66 and IK 07 rating ensures it stands tall amid varied environmental conditions. Similar to Havells Cat. No. RINKPT45WLED757PSYMTOPC . (Make - Havells/Crompton/Philips)	Each	2.00	
5.3	Supply & Delivery of 4 CORE, 10 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4 Nominal Area of Cross section: 10 Sq.mm , Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated,Core identification: Colour coded , Inner Sheath: Wrapped /extruded with thermoplastics materials.Armouring: Galvanized single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and marked with ISI.Drum length : 500 Meter \pm 5 %. (Make-KEI/Polycab/Gloster)	Mtr.	100	
6	SEC: F: PUMP & CONTROL PANEL			

6.1	Supply, installation, testing and commissioning of continuous duty Submersible pumps Vertical type complete with 3 phase motor with all necessary protection and mechanical seal etc. complete with all ancillaries. Vendor to submit proposed pump model with duty curve. (Make - Grundfos, Willo, KSB, Texmo, Kiloskar or equivalent make)	No.	1.00	
	Water supply from UGR to OHR.			
	Flow rate : 30 cum / hr			
	Head : 30 Mts			
	Location : Inside UGR			
	Purpose : Water transfer from UGR to OHR			
6.2	Supply & Delivery of 3 Core 2.5 sq.mm. PVC Insulated & PVC Sheathed Industrial Cable for Submersible Pump Motors innersheathed, Unarmoured. (Make-KEI/Polycab/Gloster)	Mtr.	100.00	
7	SEC: G: Solar Photovoltaic Power Plant.			
7.1	Supply, Installation, Testing and Commissioning of 16 KWp grid connected power plant.			
7.1.1	S & F Mono crystalline Solar PV Module of 540 Wp + having about 72 cells suitable for 16 KWp power plant as per the following specifications (Make: IEC certified according to MNRE standard) The SPV Module must be tested, approved & certified by any one of the IEC authorized test centers.	kWp	16	
	Type: Mono crystalline silicon Cell			
	Origin : Manufactured in India			
	Efficiency: >= 18%			
	Fill factor: >= 70%			
	Degradation warranty: >=90% of design nominal power after 12 years, >=80% of design nominal power after 25 years.			
	Module frame: Non-corrosive and electrolytically compatible with the mounting structure compatible with the mounting structure			
	Termination box: Thermo-plastic, IP 66, UV resistant			
	Blocking diodes : Schottky type Each PV module must contain 3 nos. of Bypass diodes			
	Module minimum rated power The nominal power of a single PV module shall not be less than 375Wp.			
	Potential Induced Degradation(PID) Test :Modules with PID testing certificate at following test conditions or better:			
	a) Temperature: 450 ± 2°C			
	b) Negative Voltage of 1000 volts			
	c) Relative humidity: 70%			
	d) Test period: 96 hours			
	RF Identification tag for each solar module: Yes. Must be able to withstand environmental conditions and last the lifetime of the solar module			
	RF Identification tag data :			
	a) Name of the manufacturer of PV Module			
	b) Name of the Manufacturer of Solar cells			
	c) Month and year of the manufacture (separately for solar cells and module)			

	d) Country of origin			
	e) I-V curve for the module			
	f) Wm, Im, Vm and FF for the module			
	g) Unique Serial No and Model No of the module			
	h) Date and year of obtaining IEC PV module qualification certificate			
	i) Name of the test lab issuing IEC certificate			
	j) Other relevant information on traceability of solar cells and module as per ISO 9000 standard			
	Power output rating :			
	To be given for standard test conditions (STC). I-V curve of the sample module should be submitted.			
	Compliance with standards and codes :			
	IEC 61215/ IS 14286, IEC 61730 Part 1 and 2			
	Salt Mist Corrosion Testing As per IEC 61701			
	Thickness: 4.0 mm minimum for 72 Cell PV Module			
7.2	S & I Hot dip galvanized MS Structured for mounting of about 47 nos. SPV Modules with galvanization thickness of minimum 85 micron as per following specification.	Set	1	
	Wind velocity withstanding : capacity 120 km / hour			
	Structure material : Aluminium alloy 6063-T6 with an L-angle profile size of not less than 50 x 50 x 6mm and U-profile channels of not less than 33 x 33 x 3 mm.			
	Bolts, nuts, fasteners, panel mounting clamps : Stainless steel SS 304			
	Mounting arrangement for RCC flat roofs : With removable concrete ballast made of pre-fabricated PCC (1:2:4), M15			
	Mounting arrangement for metal sheet roofs Mounting directly on the sheet metal, ensuring stability and wind withstanding capacity, or penetrating the sheet metal and fixing to the sub- structure, ensuring that the roof remains water proof and ensuring stability and wind withstanding capacity.			
	Mounting arrangement for elevated structure: The elevated structure has to be securely anchored to the supporting surface. Concrete foundation of appropriate weight and depth for elevated structure direct mounted directly on the ground bolted with anchor bolts of appropriate strength for elevated structures mounted on RCC surface.			
	Mounting arrangement for ground installations: With removal concrete ballast made of pre-fabricated PCC (1:2:4), M15, assuring enough ground clearance to revent damage of the module through water, animals and other environmental factors.			
	Installation: The structure shall be designed for simple mechanical on-site installation. There shall be no requirement of welding or complex machinery at the installation site.			
	Minimum distance between roof edge/fence and mounting structure: 600 mm to 1000 mm as approved by EIC as per site condition.			
	Access for panel cleaning and maintenance: All solar panel must accessible from the top for cleaning and from the bottom for access to the module-junction box.			
	Panel tilt angle: North-south orientation with a fixed tilt angle depending on the location. The tilting angle range in Karakal will be 10.5 to 11 degrees, south facing.			
	S & Macking of necessary concrete foundation column for module mounting structure as mention below			

7.3	S & F 15 KW, 3-phase, 415 VAC adjustable up to (+ 12.5%,- 20% VAC), 50 Hz AC Grid-Tied Inverter of following specifications and as required necessary connection and earthing attachment. (Make-IEC certified according to MNRE standard) having the following specification:	Each	1	
	Total output power (AC) : To match solar PV plant capacity while achieving optimum system efficiency (DSP Band inverters to ensure higher efficiency)			
	Input DC voltage range: 200V - 950V			
	Maximum point (MPPT) tracking : Yes			
	Number of independent MPPT inputs : Minimum 3 nos			
	RFI : To minimize the both conducted and radiated RFI emissions			
	Internal Consumption Night : < 1.5 Watt			
	Regulation : Maximum 5% against input voltage and load variation			
	Dielectric strength : 1.1 KV between input/output with ground with EMI protections & 1.5 KV between input and output			
	Instrumentation: Input Voltage & Current, Output Voltage & Current, Frequency.			
	Status Indication : Input, Output, Inverter (On/Trip/Fault/Off)			
	Fault Indication : Visual indication with blinking super glowing LED audio			
	Degree of Protection : IP65			
	Cooling : Fan forced			
	Power Switching : High Efficiency IGBT			
	Power Control : Phase controlled pulse width modulation			
	Earthing Provisions : AC bypassing to earth on Inverter and DC inputs			
	Surge rating : 150% of rated output for 30 seconds			
	Grid Acceptable Range : AC Voltage +/- 17%, +/- 3			
	Operation AC voltage: Three phase 415 V (+ 12.5%, -20 %)			
	Operating Frequency range : 47.5 - 52.5 Hz With range for grid voltage and frequency parameters			
	Nominal frequency : 50 Hz			
	Power factor of the inverter : . 0.98 at nominal power			
	Total harmonic distortion : Less than 3 %			
	Built - in Protection :i. Input over voltage ii. Reverse-polarity protection iii. Reverse current to PV array protection, over voltage, iv. Under voltage protection v. Over current vi. DC inject protection to grid vii. Over current viii. Over and under grid frequency protection ix. Anti-Islanding protection (As per VDE 0126-1-1/IEC 60255.5 or equivalent standards. Testing as per IEC)			
	Operating ambient temperature range: - 10 degree C to + 60 degree C			
	Humidity : 0 - 95% Rh			
	No load losses : less than 1% of Rated output			
	Self commutated IGBT base invertors with pulse width modulation inverter on/off Switch to be provided			

7.4	S & Laying of suitable size of wires & Cables including Wiring materials as per following specification. For dc cable ; suitable size of tinned annealed standard flexible copper conductor as per IS 694 (Make: As per Indian Standard according to MNRE standard).For ac cable : 1.1 KV, excellent resistance to heat, fire, oil,coil,abrasion,UVradiation,armoured /unarmored as per requirement standard flexible copper/armored AL. PVC insulated as per following specifications. (Make: : As per Indian Standard according to MNRE standard)	Item	1	
	General Test & Measuring Methods - IEC 61427			
	PVC insulated cables for working Voltages up to & including 1100V - IS 694/IS 1554			
	PVC insulated cables for working Voltages up to & including 1100V, UV resistant for outdoor installation - IS/IEC 69947			
	DC Cable			
	Conductor: Tinned annealed stranded flexible copper			
	Insulation: PVC			
	Standard : IS 694			
	Make: : As per Indian Standard according to MNRE standard			
	AC Cable			
	Rated Voltage : 1.1 KV			
	Construction: Excellent resistance to Heat, Fire, Oil, Cold, Water, Abrasion, UV radiation			
	Type: Armored or Unarmored as per requirement			
	Conductor: Stranded flexible Copper /Armored aluminum			
	Insulation: PVC			
	Standard: IS 1554			
	Make: As per Indian Standard according to MNRE standard			
7.5	S & Fixing PV Array Junction Box (AJB) IP65 withstand voltage 1000VDC, as per following specifications incl. necessary connection and earthing attachment.	Set	1	
	Maximum Roof space utilization : 12 sqm / kwp for true south			
	Degree of Protection: IP65			
	Design Factor of Safety: 1.5			
	Material: Polycarbonate			
	Withstanding Voltage : 1000V			
	With standing Temperature : 100 degree C			
	Accessories mounting arrangement : As suitable			
	Number of Strings entry : As may be required			
	Cable Entry and Exit			
	Position : Bottom at cable entry and exit			
	Cable Entry and Exit connector type : MC4(PV Array String cable)			
	Cable gland : Earthing cable entry			
	Fuse with fuse holder			
	Position : Positive and negative terminal for each series string			
	Type: Glass fuse, for PV use only			
	Rating : Current: Minimum 1.25 times the rated short-circuit current of the series string			
	Earthing Provision : Terminal blocks will have to be provided for Earthing			

	The footing base of the structure should be painted by good quality (IS approved) water proofing bituminous paint.			
7.6	S & F Grid Interfacing LT Panel / ACDB as per following specifications with Energy meter including necessary connection and earthing attachment.	Each	1	
	MCB			
	Make : : According to MNRE standard			
	Type : 4 Pole			
	Rating : 415V, 16A			
	Bus Bar			
	Rating :3 Ø with Neutral, 415V 16A			
	Type : Aluminum			
	Indicator : Provided			
	Earthing Provision: Terminal Blocks will be provided for Earthing			
	Enclosure			
	Degree of Protection : IP 42/43			
	Type : Sheet Steel, Powder coated. Horizontal / Vertical Enclosure dust and Vermin proof			
	Type of Fixing: Wall Mounted			
	Accessories mounting arrangement : DIN Rail or as Suitable			
7.7	S & F Lightning Conductor Air Terminal made of 20 mm dia 1000 mm long GI pipe (ISI Medium) having five discharge prongs of 4 SWG GI (Hot Dip) wire at top duly soldered with 7/16 stranded GI (Hot Dip) wire and 85 mm dia 6 mm thick GI base plate at bottom incl. necessary holes etc. complete duly grouted on the parapet etc. in CC mortar (4:2:1).	Set	4	
7.8	Supply & fixing GI (Hot Dip) strips 25 mm x 6 mm thick for horizontal run on the Parapet/Roof/ Wall with GI Saddles 1100 mm apart incl. mending <u>good the damages to building works</u>	R.M	80.10	
7.9	Supply & fixing of GI (Hot Dip) strips 25 mm x 6 mm thick for vertical run on wall with GI saddles spaced not exceeding 1000 mm apart incl. mending <u>good damages to building work</u>	R.M	34.80	
	For further technical details of Item no.-1.09 to 1.11 please refer to "Technical Specification of SPV Modules"			
7.10	Connectivity arrangement i.e; connection of net metering system as follows with local DISCOM network and coordination with DISCOM as stated below.	Set	1	
	For Net metering system: The existing service connection energy meter is to be replaced by the distribution licensee with a bidirectional energy meter of the same accuracy class as the existing service connection meter. If the existing service connection meter is already programmed for bidirectional energy recording there will be no need of replacing the matter.			
7.11	Installation, Testing and commissioning including Transposition charges.	Item	1	
	a) Type Test Certificates shall be provided for the solar modules and the solar grid inverters to provide evidence of the compliance with standards as specified this Technical Specification. Client reserves the right to ask for additional test certificates or (random) tests to establish compliance with			
7.12	Five (5) years Annual Maintenance as per follows.	Year	5	
	Preventive/Routine Maintenance: This shall include activities such as routine checking the health of the SPV Power plant, tightening of all electrical connections, changing of tilt angle of module mounting structure and any other activity that may be			

	Breakdown/Corrective Maintenance: Whenever a complaint is lodged by the user, the bidder shall attend to the same within a reasonable period of time of 48hours and in any case the breakdown shall be corrected within a period not exceeding 72hours from the date of complaint.			
	a) Adequately trained manpower, specifically trained by the bidder for carrying out the service activities			
	b) The suppliers should provide generation data on annual basis for the initial 2 years. The security money will be released based on performance of the plant in respect of generation			
	c) Adequate spares and manpower for ensuring least downtime of an individual system.			
	S & F other accessories are as follows.			
7.13	Danger Board of Size 200 mm x 300 mm	Each	1	
7.14	S/I in position approved make carbon dioxide 4.5 Kgs capacity fire extinguisher, made of high pressure with wheel type valve with one meter long braided high pressure discharge hose	Each	3	
7.15	GI bucket as per IS, capacity 9 Ltrs filled with sand. (Fire Shield/ Minimax Make).	Each	3	
7.16	Supplying and fixing 415V 32A TPN Main Switches in Sheet steel enclosure with fuse on angle iron frame on wall. (Make According to MNRE standard	Each	2	
7.17	Supply of 1100 Volt grade 4 core 10 sq.mm Aluminium Conductor, XLPE Insulated, Armoured Power Cable. (Make According to MNRE standard)	R.M	100	
7.18	Laying of 4 core 10 sqmm cable on wall/surface incl. S & F MS saddles with making holes etc. as necy. mending good damages and painting. (Without earthing attachment 10 SWG GI)	R.M	90	
7.19	Laying of 4 core 10 sqmm cable through existing GI Pipe.	R.M	10	
7.20	Supplying and fixing compression type gland complete with brass gland, brass ring & rubber ring for dust & moisture-proof entry of XLPE/PVC armoured cables as below : 4 core 10 sq.mm	Each	4	
7.21	Finishing the end of following XLPE/PVC armoured cables by crimping method incl. supplying and fixing solderless socket (Dowels make), tapes, anticorrosive paste & jointing materials : 4 Core 10 sqmm.	Set	4	
7.22	Supplying & fixing 32 mm dia medium gauge GI Pipe (ISI- Medium) Protection with necessary fittings and jointing materials as required.	R.M	18	
7.23	Earthing with 50 mm dia GI pipe 3.64 mm thick x 3.04 Mts. long and 1 x 4 SWG GI (Hot Dip) wire (4 Mts. long), 13 mm dia x 80 mm long GI bolts, double nuts, double washers incl. S & F 15 mm dia GI pipe protection (1 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level driven to an average depth of 3.65 Mts. below the ground level as below	Each	8	
7.24	Extra for treatment of soil by using salt & charcoal or coke for plate electrode.	Each	8	
7.25	Supplying & fixing earth busbar of galvanized (Hot Dip) MS flat 25 mm x 6 mm on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc. as required.	R.M	1	
7.26	Connecting the equipments to earth busbar including S & F GI (Hot Dip) wire of size as below on wall/floor with staples buried inside wall/floor as required and making connection to equipments with bolts, nuts, washers, cable lugs etc. as required and mending good damages: No. 4 SWG	R.M	120	

7.27	Distribution wiring in 1.1 KV single core stranded 'FR' PVC insulated & unsheathed copper wire in 25 mm size PVC rigid conduit 'FR' incl. necy.fittings as required: 4 x 6 sq.mm + 2 x 4 sq.mm ECC.	R.M	10	
8	SEC: H: Glow Sign Board.			
8.1	Supply, Fabrication, Fixing and fitting of angle iron frame fabricated from 50mmX50mmx5mm MS L angle with cross angle & redial support including six numbers 6inchesX6inches x10 mm MS base plate for fixing on the structure with all necessary welding & fabrication. the structure shall be proper welding as per instruction of E.I.C including painting as directed by E.I.C.	kgs	412.50	
8.2	Supply & Installation of M.S. structure duly fabricated & welded by 50 mm x 25 mm 18g M.S. square pipe ISI mark with red oxide duly welded size:18' x 4' to be made such a manner that it can be opened towards up direction for taking maintenance.	sq.ft.	72.00	
8.3	Supply and fixing ACP back lit LED sign board made 3 mm thick ACP sheet(Alstone/aludecor/Timexbond) finished with approved metallic colour as back ground (Deep Blue) after router cutting. The riser structure also shall be covered with ACP sheet.(Front side ACP sheet) (including 4 side are moulded by ACP) LED board.	SqFt	72.00	
8.4	Supply and fixing special type of imported acrylic letter (3 mm thick) projected on the ACP board 50 mm. The letter font shall be in horizontal line.	inch	750.00	
8.5	S&F 230V, .70 Watt LED module inside the acylic sheet letter. One run for each letter including wiring (Make- GOQ/ Aries of Samsung chip)	each	1100.00	
8.6	S & F water proof 400 watt power supply system IP65, 50/60Hz frequency, 108 to 305V , AC power supply, 0.85 power factor for LED lamp. (Union/Aries make) = 1 No board	set	1.00	
8.7	Supply And drawing 2 x1.5 sqmm. copper wire for LED module connection and SMPS connection. = 1 No board	Mtr.	87.50	
8.8	Making brick foundation 4:1 cement motor having dimension 250mmX250mmX500mm with necessary plaster cement finish as per direction of EIC.	each	4.50	
8.9	Transportation cost for taking away the LED sign board from Company's workshop to work site incl loading/unloading .	item	1.00	
8.1	Supply & Fixing of 40mm GI sheet pre coated for back pnale of signage, make - Jindal, Tata, Aarti, Bhushan or equivalent	sq.ft.	72.00	
8.11	Supply of 2Cx 10 sqmm, 1.1KV Al. armour, XLPE Armoured cable as directed by EIC. (Make:-KEI /Polycab/Havells)	Mtr	20.00	
9	SEC: I: ELEVATOR			
9.1	Supply & Installation of ONE number PASSENGER ELEVATOR WITH MACHINE ROOM, THREE PHASE, G+3, 13 PASSENGERS, SS DESIGNER CABIN WITH FALSE CEILING, and SS AUTOMATIC DOOR WITH ARD & Specification as follows:-	No.	1.00	

	<p>TECHNICAL SPECIFICATION</p> <p>NO. OF LIFT: ONE (01) PASSENGER ELEVATOR WITH MACHINE ROOM</p> <p>LOAD/CAPACITY : 13 PASSENGERS (UPTO 884 KGS)</p> <p>TRAVEL: GROUND TO 3RD FLOOR (09 MTR APPROX)</p> <p>SPEED: 0.63 Meter Per Second</p> <p>STOP & OPENING : FOUR Stops & FOUR Opening (ALL ARE IN SAME)</p> <p>POWER SUPPLY : 440 Volts THREE phase Power Supply.</p> <p>OPERATION : Down Collective control without attendant.</p> <p>MACHINE POSITION : INSIDE THE SHAFT ABOVE THE GUIDE RAIL.</p> <p>CAR ENCLOSURE: SS DESIGNER CABIN WITH FALSE CEILING.</p> <p>CAR FLOORING: PVC Floor Matt; CAR DIMENTION: As per Indian Standard; CAR DOOR: SS AUTO DOOR; LANDING DOOR: SS AUTO DOOR; SIGNALS: Push Button with Digital Display & UP/DN Indication.;</p> <p>HOISTWAY ENTRANCE: AS PER IS STANDERD</p> <p>HOIST/SHAFT: AS PER IS STANDERD; LOP & COP: Acrylic finish & seven segment display; CONTROLLER PANEL: Fully Micro Processor integrated controlled Down collective With Inbuilt fire alarm, Voice announcer, floor announcing system, anti-shock-able gate lock</p> <p>MACHINE: CE CERTIFIED GEARED MACHINE; CYLINDER TYPE: N/A;</p> <p>ROPE SAFETY FEATURES : Usha Martine Rope</p> <p>: FINAL LIMIT, EMERGENCY STOP.;; OVER HEAD REQUIRED : 4200 MM;</p> <p>PIT DEPTH REQUIRED: 1500 MM; EMERGENCY ALERM BELL: YES;</p> <p>UP/DOWN INDICATION AT LANDING: YES</p> <p>LUMINIOUS CALL INDICATOR: YES; DIGITAL CAR POSITION INDICATOR: YES; TERMINAL LIMIT SWITCH: YES; OVER SPEED PROTECTION: YES; PHASE PREVENTOR: YES; OVERLOAD PROTECTION FOR MACHINE: YES; PHASE FAILURE PROTECTION: YES; REVERSE PHASE PROTECTION: YES</p> <p>EMERGENCY STOP SWITCH: YES; ARD: YES</p>			
10	SEC: J: Diesel Generator Set			
	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 500 kVA output continuous rating, 3 Phase, 415V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722- 2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising of meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc. and obtaining necessaryapproval from Electrical Inspector as per specification no. GENDG</p>	Set	1.00	
	TOTAL AMOUNT			-
	Add GST @ 18%			-
	Total Amount			-
	Add Labour Welfare Cess @ 1%			-
	Total Amount			-

BOQ FOR PROPOSED HVAC WORKS FOR FOOD COURT AND A.C. RESTAURANT NEAR AQUARIUM AT ZOOLOGICAL GARDEN, ALIPORE, KOLKATA

Sl. No	Description of works	Quantity	Rate (Rs.)	Unit	Amount Rs. P
HVAC WORKS (NON-SCHEDULED ITEMS)					
A. HVAC WORK					
1.00	Supply of Side Discharge Type DC Inverter Outdoor units equipped with Variable refrigerant flow Cooling only unit comprising all inverter driven Scroll compressor with fully factory charged Eco friendly R-410A refrigerent gas. All the units shall be provided with micro processor based control for sequential starting of condensing units, scanner for fault analysis at ODU, delta design heat exchanger coils, minimum 15 Steps speed control DC motor condenser fan, Electronic expansion valves, inbuild night silent operation , fins with specially factory coated hydrophilic treatment for heat & rust corrossion & condensing units should be capable for outside ambient 52°C. Make: Toshiba 136 HP				
1.10	TOSHIBA 20 HP OUD	3		Nos.	
1.20	CARRIER 24 HP OUD	1		Nos.	
1.30	TOSHIBA 26 HP OUD	2		NOS	
1.40	indoor unttts Ductbale 16tr(20 HPr)	6		nos	
1.50	indoor untis Ductbale , 8.0 TR(10HP)	3		NOS	
1.60	Indoor Units with Corded Remote :	9		NOS	
1.70	Y joints for indoor units (Make-TOSHIBA)	6		Nos.	
PART-B LOW SIDE WORKS					
2.00	Installation, Testng & Commissioning of VRF Units , with outdoor mounting, pressure testing, nitrogen flushing and vacuuming etc.				
2.1	16HP VRF ODU & indoor	136		Nos.	
3.00	Supply & filling of gas charging with R-410A refrigerant as required as per OEM	70		Kg.	
REFRIGRANT PIPING					
4.00	Supply, Installation, Testing & commissioning of interconnecting suitable sized as per Drawing/Design - copper refrigerant pipe work duly insulated with (19mm/13mm thick) elastomeric nitrile rubber type tubular insulation between indoor & outdoor units as per specifications.				
4.01	41.3 mm O.D.(insulation : 19 mm)	250		ft	
4.02	38.1 mm O.D.(insulation : 19 mm)	300		ft	
4.03	31.8 mm O.D.(insulation : 19 mm)	500		ft	
4.04	28.6 mm O.D.(Insulation : 19mm)	350		ft	
4.05	25.4 mm O.D.(insulation : 19 mm)	500		ft	
4.06	22.2 mm O.D.(insulation : 19 mm)	250		ft	
4.07	19.1 mm O.D.(insulation : 19 mm)	200		ft	
4.08	15.9 mm O.D.(insulation : 13 mm)	150		ft	
4.09	12.7 mm O.D.(insulation : 13 mm)	300		ft	
4.10	9.53 mm O.D.(insulation : 13 mm)	450		ft	
4.11	6.35 mm O.D.(insulation : 13 mm)	300		ft	

5.00	TRANSMISSION & CONTROL WIRING				
	Providing & fixing control cum transmission copper shielded cable in medium duty PVC Conduit between indoor and outdoor units.				
5.10	3C x 1.0 Sqmm Cu Cable	4000		ft	
6.00	DRAIN PIPING				
	Providing & fixing rigid UPVC piping complete with fittings, supports as per specifications and pre insulated with 6mm thick closed cell elastomeric nitrile rubber tubular insulation.				
6.10	25mm OD	10		Rmt	
6.20	32mm OD	5		Rmt	
7.00	Supply & Installation of a Y joints for indoor units (Make-TOSHIBA)	7		Nos.	
8.00	Lifting, Shifting of ODU unit to suitable location as per drawing	6		Nos.	
9.00	Supply and erection of MS ODU platform for VRF ODU	1		LS	
	AIR DISTRIBUTION SYSTEMS				
10.00	24 G Ducting for Fresh Air and Treated Air Disbursal into open conditioned Area	180		Sqm	
10.10	Fresh Air Intake Louvers with Chicken wire mesh	6		Sqm	
10.20	Duct Dampers for Air supply	6		Sqm	
10.30	AL Grilles and Diffusers for Distribution of Treated Fresh Air	20		Sqm	
10.40	Inline exhaust fan 700CFM	9		nos	
11.00	GSS Duct fabrication& necessary erection only, complete with necessary hangers / supports , with all necessary rod, angle, support etc.				
11.10	22 G	1800		SFT	
11.20	24G	3600		SFT	
11.30	GSS Duct Damper	30		SFT	
12.00	Supply and installation Nitrlye Thermal Insualtion for DUCT-9 mm	5400		SFT	
13.00	Aquostic insulation with 12mm thick rigid board and tissue paper	360		SFT	
14.00	Aluminium powder coated Liner air grilles supply with Retwen	360		SFT	
15.00	Canvas canaction	6		Nos	
SUB TOTAL					0.00
GST @18%					0.00
Total with GST					0.00
Labour Welfare Cess @ 1%					0.00
Total					0.00

BOQ FOR PROPOSED FIRE FIGHTING AND FDA SYSTEM FOR FOOD COURT AND A.C. RESTAURANT NEAR AQUARIUM AT ZOOLOGICAL GARDEN, ALIPORE, KOLKATA

SI. No	Description of works	Quantity	Rate (Rs.)	Unit	Amount Rs. P
FIRE FIGHTING WORKS (SCHEDULED ITEMS)					
A. FIRE FIGHTING WORKS					
1.00	Providing, laying, testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 3589/IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required. Apporoved make : TATA/JINDAL/BANSAL.				
1.10	200 mm. dia (wall thickness = 6.3 mm)	25	4,872.99	Mtr	1,21,824.75
	Ref- CPWD DSR_2022 Sch. Page- 68, It. No-18.7.9				
1.20	150 mm. Dia	225	3,188.90	Mtr	7,17,502.50
	Ref- CPWD DSR_2022 Sch. Page- 68, It. No-18.7.8				
1.30	80mm dia	106	1,681.42	Mtr	1,78,230.52
	Ref- CPWD DSR_2022 Sch. Page- 68, It. No-18.7.6				
1.40	65 mm dia	90	1,439.68	Mtr	1,29,571.20
	Ref- CPWD DSR_2022 Sch. Page- 68, It. No-18.7.5				
1.50	50mm dia	125	1,142.65	Mtr	1,42,831.25
	Ref- CPWD DSR_2022 Sch. Page- 68, It. No-18.7.4				
1.60	40mm dia	100	922.32	Mtr	92,232.00
	Ref- CPWD DSR_2022 Sch. Page- 68, It. No-18.7.3				
1.70	32mm dia	50	759.09	Mtr	37,954.50
	Ref- CPWD DSR_2022 Sch. Page- 68, It. No-18.7.2				
1.80	25mm Dia	150	663.64	Mtr	99,546.00
	Ref- CPWD DSR_2022 Sch. Page- 68, It. No-18.7.1				
2.00	Supplying and fixing Single headed external yard hydrant valve with 1 No. 63 mm dia instantaneous FM Stainless Steel coupling and cast iron wheel, ISI marked, conforming to IS 5290 (type A) with blank Gunmetal/Stainless Steel cap and chain as required . (a) Single Headed Stainless Steel.	7	5,475.98	Each	38,331.86
	Ref- CPWD DSR_2022 Sch. Page- 68, It. No-18.10.2				
3.00	Supplying and fixing 63 mm dia, 15 m long RRL hose pipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636 (type-A) as required.				
3.10	Gun Metal	14	4,640.18	Each	64,962.52
	Ref- CPWD DSR_2022 Sch. Page- 70, It. No-18.16.1				
4.00	Supplying & fixing 63 mm dia gun metal short branch pipe with 20 mm nominal internal diameter size nozzle conforming to IS 903 suitable for instantaneous connection to interconnect hose pipe coupling as required				
4.10	Gun Metal	7	2,155.07	Each	15,085.49
	Ref- CPWD DSR_2022 Sch. Page- 70, It. No-18.18.1				

5.00	Supplying and fixing of fire brigade connection (4 way) of cast iron body with gun metal male instantaneous inlet couplings complete with cap and chain as reqd. for suitable dia MS pipe connection conforming to IS 904 as required : 4-Way -150mm dia M.S. Pipe	1	12,464.81	Each	12,464.81
Ref- CPWD DSR_2022 Sch. Page- 70, It. No-18.19.2					
6.00	Supplying and fixing first-aid Hose Reel with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required. 20 mm nominal internal dia water hose thermoplastic (Textile reinforced) type -2 as per IS: 12585 20 mm nominal internal dia gun metal globe valve & nozzle. Drum and brackets for fixing the equipments on wall. Connections from riser with 25 mm dia stop gun metal valve & M.S. Pipe and socket				
6.10	30M	6	7,738.10	Each	46,428.60
Ref- CPWD DSR_2022 Sch. Page- 70, It. No-18.17.1					
7.00	Supplying, fixing, testing & commissioning of double flanged sluice valve of rating PN 1.6 with non rising spindle, bronze/gun metal seat, ISI marked complete with nuts, bolts, washers, gaskets and conforming to IS 780 of following sizes as required				
7.10	200 mm	1	35,084.14	Each	35,084.14
Ref- CPWD DSR_2022 Sch. Page- 69, It. No-18.12.7					
7.20	150 mm	4	20,303.70	Each	81,214.80
Ref- CPWD DSR_2022 Sch. Page- 69, It. No-18.12.6					
7.30	80 mm	3	9,540.83	Each	28,622.49
Ref- CPWD DSR_2022 Sch. Page- 69, It. No-18.12.4					
7.40	65 mm	3	8,238.51	Each	24,715.53
Ref- CPWD DSR_2022 Sch. Page- 69, It. No-18.12.3					
7.50	50 mm	3.00	6,428.64	Each	19,285.92
Ref- CPWD DSR_2022 Sch. Page- 69, It. No-18.12.2					
8.00	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required.				
8.10	150 mm dia	6	7,992.32	Each	47,953.92
Ref- CPWD DSR_2022 Sch. Page- 69, It. No-18.11.6					
8.20	80 mm dia	3	4,443.94	Each	13,331.82
Ref- CPWD DSR_2022 Sch. Page- 69, It. No-18.11.4					
9.00	Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required.				
9.10	200mm Dia	2.00	26,119.54	Each	52,239.08
Ref- CPWD DSR_2022 Sch. Page- 69, It. No-18.14.8					
9.10	150 mm dia	4	15,865.11	Each	63,460.44
Ref- CPWD DSR_2022 Sch. Page- 69, It. No-18.14.7					
9.20	80mm dia	5.00	6,860.37	Each	34,301.85
Ref- CPWD DSR_2022 Sch. Page- 69, It. No-18.14.4					
9.30	65 mm dia	3	5,724.86	Each	17,174.58

	Ref- CPWD DSR_2022 Sch. Page- 69, It. No-18.14.3				
10.00	Providing & fixing of pressure switch in M.S. pipe line including connection etc. as required.	3	1,379.03	Each	4,137.09
	Ref- CPWD DSR_2022 Sch. Page- 70, It. No-18.22				
11.00	Supplying and fixing air vessel made of 250 mm dia, 8 mm thick MS sheet, 1200 mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25 mm dia gun metal wheel valve with required accessories, pressure gauge and painting with synthetic enamel paint of approved shade as required.	1	16,273.65	Set	16,273.65
	Ref- CPWD DSR_2022 Sch. Page- 70, It. No-18.20				
12.00	Providing, fixing, testing & commissioning of 15mm dia quartzoid bulb type sprinklers of rating 68 degree centigrade with required accessories (Pendant Sprinkler).	100	465.62	Each	46,562.00
	Ref- CPWD DSR_2022 Sch. Page- 70, It. No-18.21.1				
13.00	Providing, fixing, testing & commissioning of 15mm dia quartzoid bulb type sprinklers of rating 68 degree centigrade with required accessories (Horizontal Side Wall Sprinkler).	26	550.36	Each	14,309.36
	Ref- CPWD DSR_2022 Sch. Page- 70, It. No-18.21.3				
14.00	Providing, fixing, testing & commissioning of installation control valve of cast iron body, brass/bronze working parts comprising of water motor alarm, bronze seat clapper, clapper arm and hydraulically driven mechanical gong bell to sound continuous alarm when the wet riser/sprinkler system activates, pressure gauges, emergency releases, strainer, pressure switch, cock valve complete with drain valve and bypass, test control box, ball valves, MS pipe of required size, flanges, orifice plate, gasket etc of following sizes as required . 150mm dia				
	Ref- CPWD DSR_2022 Sch. Page- 71, It. No-18.24.3	2.00	42,996.18	Each	85,992.36
15.00	Supplying, installation, testing and commissioning of Electric driven Main Fire Pump suitable for automatic operation and consisting of following, complete in all respects, as required : (a) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520. (b) Suitable HP(60 HP) Squirrel cage induction motor, TEFC, synchronous speed 1500 RPM, suitable for operation on 415 volts, 3 phase 50 Hz, AC supply with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325. (c) M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.(with 35mm x 35mm x 5mm angle frame on edges) (d) Suitable cement concrete foundation duly plastered with anti vibration pads. 2850 lpm at 70 m Head.				
15.10	2850 lpm at 70 m Head	2	3,61,108.36	Set	7,22,216.72
	Ref- CPWD DSR_2022 Sch. Page- 60, It. No-18.1.2				

16.00	Supplying, installation, testing and commissioning of electric driven pressurisation pump suitable for automatic operation and consisting of following, complete in all respects, as required : (Jockey Pump) Horizontal type, multistage, centrifugal pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS : 1520. Suitable HP (11 HP) squirrel cage induction motor TEFC type suitable for operation on 415 volts, 3 phase 50 Hz. AC supply with IP 55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS : 325. M.S.fabricated Common base plate, coupling, couplingguard, foundation bolts etc. as required.(with 35mm x 35mm x 5mm angle frame on edges) Suitable cement concrete foundation duly plastered and with anti vibration pads. 180 lpm at 70 m Head.				
16.10	180 lpm at 70 m Head	1	92,147.17	Set	92,147.17
	Ref- CPWD DSR_2022 Sch. Page- 61, It. No-18.3.2				
17.00	Fabrication, supply, Installation testing & commissioning of Electrical control panel of cubical construction, floor mounted type, fabricated out of 2mm thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, interconnection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for main fire pump, pressurisation pump & diesel pump set complete as per CPWD specification with following in coming and Outgoings, suitable for operation on 415V, 3 phase, 50Hz Ac Supply with enclosure protection class IP 42 as required				
	INCOMING 400A, 50kA 4 Pole MCCB, Ics=100% Icu rating Digital Voltmeter 0-500V with selector switch Ammeter (0-400 A) with selector switch & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 500A Outgoings (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps) Main Fire Pump 200 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 75 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.				
	Jockey Pump 100 A, 50kA TPN MCCB, Ics=100% Icu, with suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.				


	Diesel Engine Control Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempt starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine System Controller Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specifications.	1	2,56,766.66	Set	2,56,766.66
	Ref- CPWD DSR_2022 Sch. Page- 63, It. No-18.5.2				
18.00	Supply of Chlorinated Polyvinyl Chloride (CPVC) pipes & fittings conforming to IS-15778: 2007				
18.10	Ball Valve				
18.11	25mm dia	7	239.00	Each	1,673.00
	PWD Sch (S&P), 2017 P-33, It No- 2Q				
18.12	15mm dia	8	99.00	Each	792.00
	PWD Sch (S&P), 2017 P-33, It No- 2Q				
18.13	50mm dia	8.00	1,128.00	Each	9,024.00
	PWD Sch (S&P), 2017 P-33, It No- 2Q				
19.00	Wiring for Circuit/submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor single core cable in surface/recessed medium class PVC conduit as required.				
19.10	4 x 10 sq.mm + 2 x 6 sq mm earth wire	60.00	896.46	Mtr	53,787.60
	Ref- CPWD DSR_2022 Sch. Page- 3, It. No-1.14.10				
20.00	Application of priming coat for standard bituminous waterproofing treatment over flat roof/ M.S pipis with Bitumen primer of approved brand fulfilling the provision of I.S. 1346 - 1991 & 3384 - 1986 applied @ 0.27 Liters /Sq.m. over clean and prepared roof/pipe surface complete as per satisfaction of the Engineer - in - Charge.	2510	24.00	Sqm	60,240.00
	PWD Sch (Buldg), 2017 P-93, It No- 3				
21.00	Painting with ready mixed red lead paint of approved make and brand. (a) Tow Coats	2510	55.00	Sqm	1,38,050.00
	PWD Sch (Buldg), 2017 P-202, It No- 9 (b)				
22.00	Supplying, installation, testing & commissioning of sprinkler flexible pipe (UL Listed) of stainless steel complete with 15 NPT on reducer thread with maximum working pressure of 175 PSI test pressure of 875 PSI (Burst) with branch line (Inlet) 25mm NPT male thread to sprinkler head (Outlet) 15mm NPT female thread with reducer, nipple, 2 side brackets, center bracket, stockbar of following sizes complete as required.				
	1000 mm Length	75	1,407.57	Set	1,05,567.75
	Ref- CPWD DSR_2022 Sch. Page- 74, It. No-18.25.2				
	1200 mm Length	25	1,489.64	Each	37,241.00

	Ref- CPWD DSR_2022 Sch. Page- 74, It. No-18.25.3				
	B. FIRE DETECTION SYSTEM				
23.00	Supplying, installation, testing & commissioning of main control and indicating panel made out of 16 SWG MS Sheet to accommodate the following items duly powder coated in approved colour with louver for ventilation, locking arrangement, audio and visual indication for fire alarm and public address system, monitoring system including connections etc complete as required.	3	62,786.99	Each	1,88,360.97
	10 Zone panel for fire alarm system				
	250Watt amplifier racks suitable for operation on 230V AC / 24V DC supply conforming to IEC-268-3 complete with all accessories as required -2 Nos. (one to act as standby)				
	Talk back Master station with LED PTT (press to talk) push button for operation on 230V AC/24 V DC supply conforming to IEC-268 for simplex mode of operation / communication suitable for 20 Nos talk back unit - 1 set.				
	Announcement control desk suitable for selection of different zones selectively and ON ALL CALL switch with visual indication etc. Complete as required - 1 set				
	Amplifier change over switch for inter changing amplifier -1 No.				
	Monitor panel for loudspeaker complete with output selector, ON/OFF switch, fuse, visual indications etc. complete as required - 1 No.				
	Gooseneck microphone with stand and ON/OFF switch - 1 No.				
	Main ON/OFF switch, fuse indication lamps, DC and AC voltmeters & ammeters, terminal blocks etc. complete as required - 1 set				
	Battery Charger trickle cum boost to take complete load of fire alarm & PA system complete with all accessories including providing & fixing of 2 Nos 12 Volt , 60AH each sealed maintenance free batteries- 1 Set				
	Ref- CPWD SOR_AOR2022 Sch. Page- 55, It. No-17.1.10				
24.00	Supplying, Installation, testing & commissioning of Smoke Detector with builtin LED and mounting base complete with all connections etc. as required	120	1,028.47	Each	1,23,416.40
	Ref- CPWD DSR_2022 Sch. Page- 55, It. No-17.1.2				
25.00	Supplying, Installation, testing & commissioning of intelligent addressable thermal detector with rate of rise cum fixed temperature thermistor complete with base as required	120	2,431.59	Each	2,91,790.80
	Ref- CPWD DSR_2022 Sch. Page- 58, It. No-17.2.9				
26.00	Supplying, Installation, testing & commissioning of manual call boxes of MS construction in surface/recess with stainless steel chain and hammer assembly complete with glass and push button etc.	27	422.81	Each	11,415.87
	Ref- CPWD DSR_2022 Sch. Page- 55, It. No-17.1.3				
27.00	Supplying, Installation, testing & commissioning of intelligent aspiration detector for area coverage of minimum 5000 sq. ft. complete as required	3	2,63,430.79	Each	7,90,292.37
	Ref- CPWD DSR_2022 Sch. Page- 58, It. No-17.2.8				

28.00	Supplying, installation, testing and commissioning of micro processor based intelligent addressable main fire alarm panel, central processing unit with the following loop modules and capable of supporting not less than 240 devices (including detectors) and minimum 120 detectors per loop and loop length up to 2 km, network communication card, minimum 320 character graphics/ LCD display with touch screen or other keypad and minimum 4000 events history log in the non volatile memory (EPROM), power supply unit (230 ± 5% V, 50 hz), 48 hrs back-up with 24 volt sealed maintenance free batteries with automatic charger. The panel shall have facility to connect printer to printout log and facility to have seamless integration with analog / digital voice evacuation system (which is part of the schedule of work under SH : PA System) and shall be compatible for IBMS system with open protocol BACnet/ Modbus over IP complete as per specifications.				
	Ten Loop Panel	3	4,06,336.33	Each	12,19,008.99
	Ref- CPWD DSR_2022 Sch. Page- 57, It. No-17.2.1.1				
29.00	Supplying, installation, testing & commissioning of 6 zone voice alarm controller with USB, MP3 player (including 6 zone button paging station) with seamless integration facility with main fire alarm panel for voice evacuation complete as required.	3	1,12,758.61	Each	3,38,275.83
	Ref- CPWD DSR_2022 Sch. Page- 58, It. No-17.3.1				
30.00	Supplying, installation, testing & commissioning of ceiling / wall mounted loud speaker, 3/1.5 Watt in ABS encloser complete as required	60	2,165.78	Each	1,29,946.80
	Ref- CPWD DSR_2022 Sch. Page- 58, It. No-17.3.4				
31.00	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface / recessed steel/ PVC conduit as required				
31.10	1 x 1.5 sq. mm (1.17.1)	850	40.14	Mtr	34,119.00
31.20	2 x 1.5 sq. mm (1.17.2)	1170	62.44	Mtr	73,054.80
31.30	3 x 1.5 sq. mm (1.17.3)	1120	84.74	Mtr	94,908.80
	Ref- CPWD DSR_2022 Sch. Page- 3, It. No-1.17				
		TOTAL =			70,53,721.56
		Add 18% GST			12,69,669.88
		TOTAL =			83,23,391.44
		Add 1% Labour Welfare Cess			83,233.91
		TOTAL =			84,06,625.36

**BOQ FOR PROPOSED FIRE FIGHTING AND FDA SYSTEM FOR FOOD COURT AND A.C. RESTAURANT
NEAR AQUARIUM AT ZOOLOGICAL GARDEN, ALIPORE, KOLKATA**

Sl. No	Description of works	Quantity	Unit	Amount Rs. P
FIRE FIGHTING WORKS (NON-SCHEDULED ITEMS)				
A. FIRE FIGHTING WORKS				
1.00	Wheeled Carbon Di-oxide Type Fire Extinguisher, ISI Marked (IS16018:2012), CE Certified, Containing CO2 gas having purity 99.7% filled in Seamless Cylinder having approval from Petroleum and Explosives Safety Organisation (PESO), coated with High Glossy PU Paint, ISI marked Dual Spindle Valve with Aluminium Wheel & Collar and inbuilt pressure relief device, Heavy duty rubber hose with metal wire embedded for discharging static electricity during operation, rugged trolley with heavy duty wheel assembly, High durability Vinyl label (3M make), QR Code label with printed serial number			
	CO2 6.5 Kg : IS 16018 (Fire Rating 55B)	27.00	Each	
2.00	Supplying and erecting ABC powder type fire extinguisher ISI Marked (IS15683:2018), CE and EN Certified, Pure Polyester Coated Body, Forged brass valve (CE Marked) with in built pressure relief Device and Non Return Valve for pressure gauge port, Stainless Steel safety pin, High durability Vinyl label (3M make), QR Code label with printed serial number, Individually packed in 7 Ply corrugated paper box together with Wall Braket, screws & plugs and service manual as per IS : 13849/15683 of 6 kg capacity with necessary clamp for erection on wall. Stored Pressure (FFire Rating 4A 144 B)	9.00	Each	
3.00	Supplying and erecting Mild Steel Fire Sand Bucket with Sand, each set comprises of three sand filled buckets	9	Set	
4.00	Supplying and erecting Mild Steel Stand for sand buckets including fitting and fixing in position as directed	9	Each	
		TOTAL =		0.00
	Add GST @ 18%			0.00
		TOTAL =		0.00
	Add 1% Labour Welfare Cess			0.00
		TOTAL =		0.00

West Bengal Tenders		eProcurement System of Government of West Bengal		
Tender Details				
		Date : 29-Jan-2024 11:05 PM		
 Print				
Basic Details				
Organisation Chain	WEST BENGAL FOREST DEVELOPMENT CORPORATION LTD. KOLKATA FOREST CORPORATION DIVISION			
Tender Reference Number	08/29-45/22-23/2023-24 (5th Call)			
Tender ID	2024_FDCL_656243_1	Withdrawal Allowed	Yes	
Tender Type	Open Tender	Form of contract	Item Wise	
Tender Category	Works	No. of Covers	2	
General Technical Evaluation Allowed	No	ItemWise Technical Evaluation Allowed	No	
Payment Mode	Online	Is Multi Currency Allowed For BOQ	No	
Is Multi Currency Allowed For Fee	No	Allow Two Stage Bidding	No	
Payment Instruments		Cover Details, No. Of Covers - 2		
Online Bankers	S.No	Bank Name		
	1	ICICI BANK		
	2	ICICI NEFT/RTGS		
Cover No	Cover	Document Type	Description	
1	Fee/PreQual /Technical	.pdf	NIT	
		.pdf	Forms, ITB, TS, GT and CC	
		.pdf	Drawing and View	
2	Finance	.xls	BOQ	
		.pdf	Estimate Details of Work	
Other Important Documents				
S.No	Category	Sub Category	Sub Category Description	Format/File
1	CERTIFICATES	CERTIFICATES	VAT/SALES TAX REGISTRATION CERTIFICATE ALONG WITH ACKNOWLEDGEMENT , PAN, LATEST IT ACKNOWLEDGEMENT, PTAX,LABOUR LICENCE	
2	CERTIFICATES	Provident Fund Certificate	Provident Fund Certificate	
3	CERTIFICATES	Employees State Insurance Certificate	Employees State Insurance Certificate	
4	CERTIFICATES	GST Registration Certificate	GST Registration Certificate	
5	CERTIFICATES	The Micro, Small and Medium Enterprises Certificate	The Micro, Small and Medium Enterprises Certificate	
6	COMPANY DETAILS	COMPANY DETAILS 1	PARTNERSHIP DEED, CO-OPERATIVE SOCIETY BYLAW, MOA,TRADE LICENCE,COMPANY REGISTRATION CERTIFICATE	
7	CREDENTIAL	CREDENTIAL 1	CREDENTIAL 1	
8	CREDENTIAL	CREDENTIAL 2	COMPLETION CERTIFICATES	
9	DECLARATION	DECLARATION FILE 1	DECLARATION FILE 1	
10	EQUIPMENT	MACHINERIES 1	MACHINERIES 1	
11	FINANCIAL INFO	PAYMENT CERTIFICATE 1	PAYMENT CERTIFICATE 1	
12	FINANCIAL INFO	P/L AND BALANCE SHEET 2018-19	P/L AND BALANCE SHEET 2018-19	
13	FINANCIAL INFO	P/L AND BALANCE SHEET 2019-20	P/L AND BALANCE SHEET 2019-20	

14	FINANCIAL INFO	P/L AND BALANCE SHEET 2020-21	P/L AND BALANCE SHEET 2020-21	
15	FINANCIAL INFO	P/L AND BALANCE SHEET 2021-22	P/L AND BALANCE SHEET 2021-22	
16	FINANCIAL INFO	P/L AND BALANCE SHEET 2022-23	P/L AND BALANCE SHEET 2022-23	

Tender Fee Details, [Total Fee in ₹ * - 0.00]

Tender Fee in ₹	0.00		
Fee Payable To	Nil	Fee Payable At	Nil
Tender Fee Exemption Allowed	No		

EMD Fee Details

EMD Amount in ₹	10,00,000	EMD Exemption Allowed	Yes
EMD Fee Type	fixed	EMD Percentage	NA
EMD Payable To	Nil	EMD Payable At	Nil

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Work / Item(s)

Title	Construction of three storied food court and air-conditioned restaurant near aquarium at Zoological Garden, Alipore, Kolkata.				
Work Description	Construction of three storied food court and air-conditioned restaurant near aquarium at Zoological Garden, Alipore, Kolkata.				
Pre Qualification Details	Please refer Tender documents.				
Independent External Monitor/Remarks	NA				
Tender Stage to disclose bid details to other bidders/public domain	No				
Tender Value in ₹	0.00	Product Category	Miscellaneous Works	Sub category	NA
Contract Type	Tender	Bid Validity(Days)	120	Period Of Work(Days)	365
Location	Zoological Garden, Alipore, Kolkata	Pincode	700027	Pre Bid Meeting Place	Office of The DM, KFCD, Aranya Bikash
Pre Bid Meeting Address	Office of The WBFDC, Kolkata Forest Corporation Division, Aranya Bikash, Salt Lake City, Kolkata - 700 106.	Pre Bid Meeting Date	02-Feb-2024 12:00 PM	Bid Opening Place	Office of The DM, KFCD, Aranya Bikash
Should Allow NDA Tender	No	Allow Preferential Bidder	No		

Critical Dates

Publish Date	30-Jan-2024 10:00 AM	Bid Opening Date	29-Feb-2024 05:00 PM
Document Download / Sale Start Date	30-Jan-2024 10:00 AM	Document Download / Sale End Date	27-Feb-2024 05:00 PM
Clarification Start Date	NA	Clarification End Date	NA
Bid Submission Start Date	06-Feb-2024 10:00 AM	Bid Submission End Date	27-Feb-2024 05:00 PM

Tender Documents

NIT Document	S.No	Document Name	Description	Document Size (in KB)
	1	Tendernotice_1.pdf	NIT	991.81
	2	Tendernotice_2.pdf	Drawing and View	3690.52

Work Item Documents	S.No	Document Type	Document Name	Description	Document Size (in KB)
	1	BOQ		BOQ_1419619.xls	BOQ
2	Additional Documents		Estimate_Details_of_Work.pdf	Estimate Details of Work	475.77

Bid Openers List

S.No	Bid Opener Login Id	Bid Opener Name	Certificate Name
1.	odcf.campa-wb@bangla.gov.in	ANGSHUMAN MUKHOPADHYAY	ANGSHUMANA MUKHOPADHYAY
2.	prithwish_dl@yahoo.co.in	PRITHWIS GHOSH	PRITHWIS GHOSH
3.	palashpaul1989@gmail.com	PALASH PAUL	PALASH PAUL

Tender Properties

Auto Tendering Process allowed	No	Show Technical bid status	Yes
Show Finance bid status	Yes	Show Bid Details in Public Domain stage	Technical Bid Opening
BoQ Comparative Chart model	Normal	BoQ Compartive chart decimal places	2
BoQ Comparative Chart Rank Type	L	Form Based BoQ	No

Tender Inviting Authority

Name	The Divisional Manager, KFCD, WBFDC
Address	Office of The WBFDC, Kolkata Forest Corporation Division, Aranya Bikash, Salt Lake City, Kolkata - 700 106.

Tender Creator Details

Created By	PRITHWIS GHOSH
Designation	Additional Divisional Manager
Created Date	29-Jan-2024 10:35 PM

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Tender Inviting Authority: The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited.

Name of Work: Construction of three storied food court and air-conditioned restaurant near aquarium at Zoological Garden, Alipore, Kolkata - 700 027.

Contract No: 08/29-45/22-23/2023-24 (5th Call)

Name of the Bidder/ Bidding Firm / Company :							
PRICE SCHEDULE							
(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)							
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	RATE In Figures entered by the Bidder for Part A (Inclusive of all taxes) in Rs. P.	RATE In Figures entered by the Bidder for Part B (Inclusive of all taxes) in Rs. P.	TOTAL AMOUNT (Inclusive of all taxes) in Rs. P. (Part A + Part B)	TOTAL AMOUNT (Inclusive of all taxes) In Words (Part A + Part B)
1	2	4	5	13	14	53	55
1	Construction of three storied food court and air-conditioned restaurant near aquarium at Zoological Garden, Alipore, Kolkata - 700 027.	1.000	Work	0.00	0.00	0.00	INR Zero Only
Total in Figures						0.00	INR Zero Only
Quoted Rate in Words		INR Zero Only					

Validate

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Percentage BoQ

Tender Inviting Authority: The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited.

Name of Work: Construction of three storied food court and air-conditioned restaurant near aquarium at Zoological Garden, Alipore, Kolkata - 700 027.

Contract No: 08/29-45/22-23/2023-24 (5th Call)

Name of the Bidder/ Bidding Firm / Company :						
PRICE SCHEDULE						
(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)						
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate (Inclusive of all taxes) in Rs. P.	TOTAL AMOUNT (Inclusive of all taxes) in Rs. P.	TOTAL AMOUNT (Inclusive of all taxes) In Words
PART A						
1	2	4	5	6	53	55
1	Civil & Sanitary, Plumbing Works for Food Court and Air-Conditioned Restaurant near Aquarium at Zoological Garden, Alipore, Kolkata.	1.000	Work	76822966.00	76822966.00	INR Seven Crore Sixty Eight Lakh Twenty Two Thousand Nine Hundred & Sixty Six Only
2	Electrical Works for Food Court and Air-Conditioned Restaurant near Aquarium at Zoological Garden, Alipore, Kolkata.	1.000	Work	1968277.00	1968277.00	INR Nineteen Lakh Sixty Eight Thousand Two Hundred & Seventy Seven Only
3	Fire Fighting & FDA System for Food Court and Air-Conditioned Restaurant near Aquarium at Zoological Garden, Alipore, Kolkata.	1.000	Work	8406625.00	8406625.00	INR Eighty Four Lakh Six Thousand Six Hundred & Twenty Five Only
Total in Figures					87197868.00	INR Eight Crore Seventy One Lakh Ninety Seven Thousand Eight Hundred & Sixty Eight Only
Quoted Rate in Figures			Select		0.00	INR Zero Only
Quoted Rate in Words			INR Zero Only			

Item Rate BoQ

Tender Inviting Authority: The Divisional Manager, Kolkata Forest Corporation Division, West Bengal Forest Development Corporation Limited.

Name of Work: Construction of three storied food court and air-conditioned restaurant near aquarium at Zoological Garden, Alipore, Kolkata - 700 027.

Contract No: 08/29-45/22-23/2023-24 (5th Call)

Name of the Bidder/ Bidding Firm / Company :	
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PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder in Rs. P.	TOTAL AMOUNT in Rs. P.	TOTAL AMOUNT In Words
1	2	4	5	13	53	55
1	Civil and Sanitary, plumbing works					
1.01	Making Partition with 19mm thick High Density Wood Polymer Composit) Board with stain less steel framing work, cutting to requisite shape and size , as per drawing and direction including supplying and fixing approved brand WPC board and SS clamps, screws etc for fixing with wall and framing works, complete in all respect including labour charges, material cost and implied taxes. In All Floors	75.000	Sqm		0.00	INR Zero Only
1.02	Supplying, fitting and fixing 19mm thick High Density WPC Door Shutter of approved brand and as per drawing with necessary SS framing work, complete in all respect. In All Floors	25.000	Sqm		0.00	INR Zero Only
1.03	Supplying, fitting and fixing Stainless Steel (Grade-304)post with required SS cleats, flanges, clamps etc as per drawing and direction. (Measurement will be taken on the length of the pipe only, no separate payments will be done for clamps, cleats , flanges etc) (a) 50mm dia x 4.91mm thick	70.000	Mtr		0.00	INR Zero Only
2	ELECTRICAL WORKS					
2.01	SEC A: LV SWITCHGEAR Supplying and fixing 415V, RCCB's in MCB enclosure on flat iron/angle iron frame on wall with nuts bolts etc. (Legrand or Eqv.)					
2.02	(i) 63A FP (100mA)	1.000	Each		0.00	INR Zero Only
2.03	(ii) 40A DP (30mA)	12.000	Each		0.00	INR Zero Only
2.04	SEC B: SUPPLY & DELIVARY OF INDOOR LIGHT/FAN FITTINGS					
2.05	Supply & Delivery of 15 Watt Recessed Round LED Downlight Fittings & Fixing. Similar to Havells Cat No. INTEGRANXTDLRD15WLED840S. (Make - Havells/Crompton/Philips)	146.000	Each		0.00	INR Zero Only
2.06	Supply & Delivery of 15 Watt Surfaced Round LED Downlight Fittings & Fixing. Similar to Havells Cat No. INTEGRANXTRDDLRSURD15WLED865S. (Make - Havells/Crompton/Philips)	155.000	Each		0.00	INR Zero Only
2.07	Supply & Delivery of 36 Watt 2'x2' Recessed Square LED Panel Light Fittings & Fixing. Similar to Havells Cat No. VENUSNEO2X2PLR36WLED857STTR. (Make - Havells/Crompton/Philips)	46.000	Each		0.00	INR Zero Only
2.08	Supply & Delivery of 36 Watt LED Suspended Light Fittings & Fixing. Similar to Havells Cat No. MONDO600RDP/S36WLED857SPSWH (Make - Havells/Wipro/Philips)	6.000	Each		0.00	INR Zero Only

2.09	Supply & Delivery of 36 Watt 4 ft. LED Tube Batten Fittings. Similar to Havells Cat No. LUMILINE+XS36WLED865SPCWH (Lumiline X). (Make - Havells/Crompton/Philips)	33.000	Each			0.00	INR Zero Only
2.1	Supply & Delivery of 10 Watt compact modern Design utility bulkhead with high energy savings. Similar to Havells Cat No. RUGBYGENXFTS10WLED865SSYMBOPC. (Make - Havells/Crompton/Philips)	3.000	Each			0.00	INR Zero Only
2.11	Supply and delivery of 1400 mm sweep, 1 phase, 60/70 watt, 5 star and having 300 mm down rod, 1.1mm thick alluminium bled, conforming IS 374, 2mm shank thickness ceiling fan. Similar to Orient Model "Summer Breeze Pro". White (Make-Orient/Havells/Crompton)	9.000	Each			0.00	INR Zero Only
2.12	Supply and delivery of 1200 mm sweep, 1 phase, 60/70 watt, 5 star and having 300 mm down rod, 1.1mm thick alluminium bled, conforming IS 374, 2mm shank thickness ceiling fan. Similar to Orient Model "Summer Breeze Pro". (Make-Orient/Havells/Crompton), Brown	5.000	Each			0.00	INR Zero Only
2.13	Supply & Delivery of fresh air cum exhaust fan of heavy duty 250 V A.C. 50 cycles 300mm. 1400 RPM rust proof body & blades, wire mesh, duly erected in an approved manner. Similar to Orient Model "Power Flow". (Make-Orient/Havells/Crompton)	12.000	Each			0.00	INR Zero Only
2.14	Supply & Delivery of fresh air cum exhaust fan of heavy duty 250 V A.C. 50 cycles 225mm. 1400 RPM rust proof body & blades, wire mesh, duly erected in an approved manner. Similar to Orient Model "Hi Speed". (Make-Orient/Havells/Crompton)	5.000	Each			0.00	INR Zero Only
2.15	Supply & Delivery of wall fan of A.C. 230 V. 50 cycles 400 mm. sweep complete with necessary brackets for fixing cabin fans, wire etc (400 mm or 16" Wall) (with Plastic Blade & Pull Cord) (Similar to Orient Model-400 mm Tornado Wall 50) (Make-Orient/Havells)	6.000	Each			0.00	INR Zero Only
2.16	SEC C: SUPPLY & DELIVARY OF LT CABLE						
2.17	4 CORE, 185 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4,Nominal Area of Cross section: 185 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated,Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.	200.000	Mtr			0.00	INR Zero Only
2.18	4 CORE, 150 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4,Nominal Area of Cross section: 150 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated,Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part-1 with latest amendment if any and ISI Marked.	150.000	Mtr			0.00	INR Zero Only
2.19	4 CORE, 120 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4,Nominal Area of Cross section: 120 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated,Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.	30.000	Mtr			0.00	INR Zero Only
2.2	4 CORE, 50 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4,Nominal Area of Cross section: 50 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated,Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.	20.000	Mtr			0.00	INR Zero Only

2.21	4 CORE, 35 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4, Nominal Area of Cross section: 35 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated, Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.	30.000	Mtr			0.00 INR Zero Only
2.22	4 CORE, 16 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4, Nominal Area of Cross section: 16 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated, Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part-1 with latest amendment if any and ISI Marked.	50.000	Mtr			0.00 INR Zero Only
2.23	2 CORE, 10 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 2, Nominal Area of Cross section: 10 Sq.mm ,Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated, Core identification: Colour coded , Inner Sheath: Wrapped / Extruded with thermoplastic materials Armouring: Galvanized Single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and ISI Marked.	30.000	Mtr			0.00 INR Zero Only
2.24	3 C x 1.5 sq. mm. PVC Flexible copper cable, 1.1 kv Gr./ Three Core , Flexible PVC insulated and PVC sheathed cable, nominal cross section are of conductor (Copper) 1.5 sqmm., 1100 Volt Grade ISI marked (conforming to IS- 694)	50.000	Mtr			0.00 INR Zero Only
2.25	3 C x 2.5 sq. mm. PVC Flexible sheathed tinned copper round cable. 1.1 kv Gr./ 3 Core x 2.5 sq. PVC insulated and Sheathed tinned copper Round Flexible wire 1100V /660 V Grade	50.000	Mtr			0.00 INR Zero Only
2.26	SEC D: LT DISTRIBUTION PANEL					
2.27	Design, supply, delivery & installation of following types of LT Distribution Panel Board (Cubicle Type) at Electrical Panel/Meter Room fabricated from SS316 grade sheet of 2 mm thick, as per "Technical Specification & Scope of Work". MAIN LT DISTRIBUTION PANEL Incoming:- 500A 4P 36 KA MCCB MP Release with handle & spreader -2 Nos. Supply & delivery of the following Current Transformer (Make: KAPPA/AE): Ratio:- 500/5A - 6 Nos. Multifunction kWh Meter -2 Nos. LED Indication Lamp (R/Y) - 10 Nos. LED Indication Lamp (B) - 2 No. 2A SP MCB-3 Nos. Surge Protection Device 15kA Type -2 - 1 No. Outgoing:- 400A FP MCCB, 36 kA, TM ® with handle & spreader - 2 Nos. 160A FP MCCB, 36 kA, TM ® with handle & spreader - 2 Nos. 100A FP MCCB, 36 kA, TM ® with handle & spreader - 2 Nos. 63A FP MCCB, 25 kA, TM ® with handle & spreader - 2 Nos.	1.000	Nos			0.00 INR Zero Only
2.28	METER PANEL- CONSISTING FOLLOWING:- Incoming:- 400A FP MCCB, 36 kA, TM ® with handle & spreader - 1 No. Supply & delivery of the following Current Transformer (Make: KAPPA/AE): Ratio:- 400/5A - 3 Nos. Multifunction kWh Meter -1 No. LED Indication Lamp (R/Y) - 2 Nos. LED Indication Lamp (B) - 1 No. 2A SP MCB-3 Nos. Surge Protection Device 15kA Type -2 - 1 No. Outgoing:- 160A FP MCCB, 25 kA, TM ® with handle & spreader - 4 Nos. 25A DP MCB, 10 kA- 8 Nos.	1.000	Nos			0.00 INR Zero Only

2.29	<p>UTILITY PANEL CONSISTING FOLLOWING:- Incoming:- 63A 4P 25KA MCCB TM Release with handle & spreader -1 No. Supply & delivery of the following Current Transformer (Make: KAPPA/AE): Ratio:- 63/5A - 3 Nos. Multifunction kWh Meter -1 No. LED Indication Lamp (R/Y) - 2 Nos. LED Indication Lamp (B) - 1 No. 2A SP MCB-3 Nos. Surge Protection Device 15kA Type -2 - 1 No. Outgoing:- 25A FP MCB, 10 kA- 4 Nos.</p>	1.000	Nos			0.00 INR Zero Only
2.3	SEC E: COMPOUND LIGHTING					
2.31	Supplying & erection of Driveway Lighting Pole of 3.66mtr. height including Bracket, Light Fittings and all accessories as required similar to K-Lite ID KP-4198 "Bishop Driveway Orna SA Lighting Pole".	10.000	Each			0.00 INR Zero Only
2.32	Supply, delivery at site and fixing of Circular LED post-top offering excellent uniform illumination and aesthetics in one go. Made up of Pressure Die Cast aluminium body and opal PC cover. IP 66 and IK 07 rating ensures it stands tall amid varied environmental conditions. Similar to Havells Cat. No. RINKPT45WLED757PSYMTOPC. (Make - Havells/Crompton/Philips)	2.000	Each			0.00 INR Zero Only
2.33	<p>Supply & Delivery of 4 CORE, 10 SQMM, XLPE ELECTRIC POWER CABLE: Voltage grade: 1.1 KV No of Core: 4 Nominal Area of Cross section: 10 Sq.mm , Conductor: Aluminum stranded conductor complying with IS: 8130 - 1984 with latest amendment if any, Core Insulation: XLPE insulated,Core identification: Colour coded , Inner Sheath: Wrapped /extruded with thermoplastics materials.Armouring: Galvanized single steel strip armouring Outer Sheath: Polyvinyl Chloride (PVC), BIS Specification: Conforming to IS: 7098 Part - 1 with latest amendment if any and marked with ISI.Drum length : 500 Meter ± 5 %. (Make-KEI/Polycab/Gloster)</p>	100.000	Mtr			0.00 INR Zero Only
2.34	SEC F: PUMP & CONTROL PANEL					
2.35	<p>Supply, installation, testing and commissioning of continuous duty Submersible pumps Vertical type complete with 3 phase motor with all necessary protection and mechanical seal etc. complete with all ancillaries. Vendor to submit proposed pump model with duty curve. (Make - Grundfos, Willo, KSB, Texmo, Kiloskar or equivalent make) Water supply from UGR to OHR. Flow rate : 30 cum / hr Head : 30 Mts Location : Inside UGR Purpose : Water transfer from UGR to OHR</p>	1.000	No			0.00 INR Zero Only
2.36	Supply & Delivery of 3 Core 2.5 sq.mm. PVC Insulated & PVC Sheathed Industrial Cable for Submersible Pump Motors innersheathed, Unarmoured. (Make-KEI/Polycab/Gloster)	100.000	Mtr			0.00 INR Zero Only
2.37	SEC G: Solar Photovoltaic Power Plant.					

2.38	<p>Supply, Installation, Testing and Commissioning of 16 KWp grid connected power plant. S & F Mono crystalline Solar PV Module of 540 Wp + having about 72 cells suitable for 16 KWp power plant as per the following specifications (Make: IEC certified according to MNRE standard) The SPV Module must be tested, approved & certified by any one of the IEC authorized test centers. Type: Mono crystalline silicon Cell; Origin: Manufactured in India; Efficiency: $\geq 18\%$; Fill factor: $\geq 70\%$; Degradation warranty: $\geq 90\%$ of design nominal power after 12 years, $\geq 80\%$ of design nominal power after 25 years; Module frame: Non-corrosive and electrolytically compatible with the mounting structure compatible with the mounting structure Termination box: Thermo-plastic, IP 66, UV resistant; Blocking diodes: Schottky type Each PV module must contain 3 nos. of Bypass diodes</p> <p>Module minimum rated power The nominal power of a single PV module shall not be less than 375Wp. Potential Induced Degradation(PID) Test: Modules with PID testing certificate at following test conditions or better: a) Temperature: $450 \pm 2^\circ\text{C}$; b) Negative Voltage of 1000 volts; c) Relative humidity: 70%; d) Test period: 96 hours</p> <p>RF Identification tag for each solar module: Yes. Must be able to withstand environmental conditions and last the lifetime of the solar module. RF Identification tag data: a) Name of the manufacturer of PV Module; b) Name of the Manufacturer of Solar cells; c) Month and year of the manufacture (separately for solar cells and module); d) Country of origin; e) I-V curve for the module; f) Wm, Im, Vm and FF for the module; g) Unique Serial No and Model No of the module; h) Date and year of obtaining IEC PV module qualification certificate; i) Name of the test lab issuing IEC certificate; j) Other relevant information on traceability of solar cells and module as per ISO 9000 standard to be given for standard test conditions (STC). I-V curve of the sample module should be submitted. Compliance with standards and codes: IEC 61215/ IS 14286, IEC 61730 Part 1 and 2; Salt Mist Corrosion Testing As per IEC 61701; Thickness: 4.0 mm minimum for 72 Cell PV Module</p>	16.000	Kwp		0.00	INR Zero Only
2.39	<p>S & I Hot dip galvanized MS Structured for mounting of about 47 nos. SPV Modules with galvanization thickness of minimum 85 micron as per following specification.</p> <p>Wind velocity withstanding: capacity 120 km/hour; Structure material: Aluminium alloy 6063-T6 with an L-angle profile size of not less than 50x50x6mm and U-profile channels of not less than 33x33x3mm.; Mounting arrangement for RCC flat roofs: With removable concrete ballast made of pre-fabricated PCC (1:2:4), M15; Mounting arrangement for metal sheet roofs Mounting directly on the sheet metal, ensuring stability and wind withstanding capacity, or penetrating the sheet metal and fixing to the sub-structure, ensuring that the roof remains water proof and ensuring stability and wind withstanding capacity. Mounting arrangement for elevated structure: The elevated structure has to be securely anchored to the supporting surface. Concrete foundation of appropriate weight and depth for elevated structure direct mounted directly on the ground bolted with anchor bolts of appropriate strength for elevated structures mounted on RCC surface. Mounting arrangement for ground installations: With removal concrete ballast made of pre-fabricated PCC (1:2:4), M15, assuring enough ground clearance to prevent damage of the module through water, animals and other environmental factors. Installation: The structure shall be designed for simple mechanical on-site installation. There shall be no requirement of welding or complex machinery at the installation site. Minimum distance between roof edge/fence and mounting structure: 600 mm to 1000 mm as approved by EIC as per site condition. Access for panel cleaning and maintenance: All solar panel must be accessible from the top for cleaning and from the bottom for access to the module-junction box. Panel tilt angle: North-south orientation with a fixed tilt angle depending on the location. The tilting angle range in Karakal will be 10.5 to 11 degrees, south facing. S & Macking of necessary concrete foundation column for module mounting structure as mention below</p>	1.000	Set		0.00	INR Zero Only

2.4	<p>S & F 15 KW, 3-phase, 415 VAC adjustable up to (+ 12.5%,- 20% VAC), 50 Hz AC Grid-Tied Inverter of following specifications and as required necessary connection and earthing attachment. (Make-IEC certified according to MNRE standard) having the following specification: Total output power (AC): To match solar PV plant capacity while achieving optimum system efficiency (DSP Band inverters to ensure higher efficiency); Input DC voltage range: 200V - 950V Maximum point (MPPT) tracking: Yes; Number of independent MPPT inputs: Minimum 3 nos RFI: To minimize the both conducted and radiated RFI emissions Internal Consumption Night: <1.5 Watt; Regulation: Maximum 5% against input voltage and load variation; Dielectric strength: 1.1 KV between input/output with ground with EMI protections & 1.5 KV between input and output Instrumentation: Input Voltage & Current, Output Voltage & Current, Frequency.; Status Indication: Input, Output, Inverter (On/Trip/Fault/Off); Fault Indication: Visual indication with blinking super glowing LED audio; Degree of Protection: IP65; Cooling: Fan forced; Power Switching: High Efficiency IGBT; Power Control: Phase controlled pulse width modulation; Earthing Provisions: AC bypassing to earth on Inverter and DC inputs; Surge rating: 150% of rated output for 30 seconds; Grid Acceptable Range: AC Voltage +/- 17%, +/- 3; Operation AC voltage: Three phase 415 V (+ 12.5%, -20 %); Operating Frequency range: 47.5 - 52.5 Hz With range for grid voltage and frequency parameters; Nominal frequency: 50 Hz; Power factor of the inverter: 0.98 at nominal power; Total harmonic distortion: Less than 3%; Built-in Protection: i. Input over voltage; ii. Reverse-polarity protection; iii. Reverse current to PV array protection, over voltage, iv. Under voltage protection; v. Over current; vi. DC inject protection to grid vii. Over current; viii. Over and under grid frequency protection; ix. Anti-Islanding protection (As per VDE 0126-1-1/IEC 60255.5 or equivalent standards. Testing as per IEC); Operating ambient temperature range: - 10 degree C to + 60 degree C; Humidity: 0 - 95% Rh; No load losses: less than 1% of Rated output Self commutated IGBT base invertors with pulse width modulation inverter on/off Switch to be provided</p>	1.000	Each			0.00 INR Zero Only
2.41	<p>S & Laying of suitable size of wires & Cables including Wiring materials as per following specification. For dc cable ; suitable size of tinned annealed standard flexible copper conductor as per IS 694 (Make: As per Indian Standard according to MNRE standard).For ac cable : 1.1 KV, excellent resistance to heat, fire, oil,coil,abrasion,UVradiation,armoured /unarmored as per requirement standard flexible copper/armored AL. PVC insulated as per following specifications. (Make: As per Indian Standard according to MNRE standard) General Test & Measuring Methods - IEC 61427 PVC insulated cables for working Voltages up to & including 1100V - IS 694/IS 1554 PVC insulated cables for working Voltages up to & including 1100V, UV resistant for outdoor installation - IS/IEC 69947 DC Cable Conductor: Tinned annealed stranded flexible copper Insulation: PVC Standard: IS 694 Make: As per Indian Standard according to MNRE standard AC Cable Rated Voltage : 1.1 KV Construction: Excellent resistance to Heat, Fire, Oil, Cold, Water, Abrasion, UV radiation Type: Armored or Unarmored as per requirement Conductor: Stranded flexible Copper /Armored aluminum Insulation: PVC Standard: IS 1554 Make: As per Indian Standard according to MNRE standard Cable gland : Earthing cable entry Fuse with fuse holder</p>	1.000	Item			0.00 INR Zero Only

2.42	<p>S & Fixing PV Array Junction Box (AJB) IP65 withstand voltage 1000VDC, as per following specifications incl. necessary connection and earthing attachment. Maximum Roof space utilization: 12 sqm / kwp for true south Degree of Protection: IP65 Design Factor of Safety: 1.5 Material: Polycarbonate Withstanding Voltage : 1000V With standing Temperature : 100 degree C Accessories mounting arrangement : As suitable Number of Strings entry : As may be required Cable Entry and Exit Position : Bottom at cable entry and exit Cable Entry and Exit connector type : MC4(PV Array String cable) Type: Glass fuse, for PV use only Rating : Current: Minimum 1.25 times the rated short-circuit current of the series string Earthing Provision : Terminal blocks will have to be provided for Earthing The footing base of the structure should be painted by good quality (IS approved) water proofing bituminous paint.</p>	1.000	Set			0.00 INR Zero Only
2.43	<p>S & F Grid Interfacing LT Panel/ACDB as per following specifications with Energy meter including necessary connection and earthing attachment. MCB Make: According to MNRE standard; Type: 4 Pole; Rating: 415V, 16A Bus Bar Rating: 3 Ø with Neutral, 415V 16A; Type: Aluminum; Indicator: Provided; Earthing Provision: Terminal Blocks will be provided for Earthing Enclosure Degree of Protection: IP 42/43; Type: Sheet Steel, Powder coated. Horizontal/Vertical Enclosure dust and Vermin proof; Type of Fixing: Wall Mounted; Accessories mounting arrangement: DIN Rail or as Suitable</p>	1.000	Each			0.00 INR Zero Only
2.44	<p>S & F Lightning Conductor Air Terminal made of 20 mm dia 1000 mm long GI pipe (ISI Medium) having five discharge prongs of 4 SWG GI (Hot Dip) wire at top duly soldered with 7/16 stranded GI (Hot Dip) wire and 85 mm dia 6 mm thick GI base plate at bottom incl. necessary holes etc. complete duly grouted on the parapet etc. in CC mortar (4:2:1).</p>	4.000	Set			0.00 INR Zero Only
2.45	<p>Supply & fixing GI (Hot Dip) strips 25 mm x 6 mm thick for horizontal run on the Parapet/Roof/ Wall with GI Saddles 1100 mm apart incl. mending good the damages to building works.</p>	80.100	R.M			0.00 INR Zero Only
2.46	<p>Supply & fixing of GI (Hot Dip) strips 25 mm x 6 mm thick for vertical run on wall with GI saddles spaced not exceeding 1000 mm apart incl. mending good damages to building work. For further technical details of Item no.-1.09 to 1.11 please refer to "Technical Specification of SPV Modules"</p>	34.800	R.M			0.00 INR Zero Only
2.47	<p>Connectivity arrangement i.e; connection of net metering system as follows with local DISCOM network and coordination with DISCOM as stated below. For Net metering system: The existing service connection energy meter is to be replaced by the distribution licensee with a bidirectional energy meter of the same accuracy class as the existing service connection meter. If the existing service connection meter is already programmed for bidirectional energy recording there will be no need of replacing the matter.</p>	1.000	Set			0.00 INR Zero Only
2.48	<p>Installation, Testing and commissioning including Transposition charges. a) Type Test Certificates shall be provided for the solar modules and the solar grid inverters to provide evidence of the compliance with standards as specified this Technical Specification. Client reserves the right to ask for additional test certificates or (random) tests to establish compliance with</p>	1.000	Item			0.00 INR Zero Only

2.49	<p>Five (5) years Annual Maintenance as per follows.</p> <p>Preventive/Routine Maintenance: This shall include activities such as routine checking the health of the SPV Power plant, tightening of all electrical connections, changing of tilt angle of module mounting structure and any other activity that may be</p> <p>Breakdown/Corrective Maintenance: Whenever a complaint is lodged by the user, the bidder shall attend to the same within a reasonable period of time of 48hours and in any case the breakdown shall be corrected within a period not exceeding 72hours from the date of complaint.</p> <p>a) Adequately trained manpower, specifically trained by the bidder for carrying out the service activities</p> <p>b) The suppliers should provide generation data on annual basis for the initial 2 years. The security money will be released based on performance of the plant in respect of generation</p> <p>c) Adequate spares and manpower for ensuring least downtime of an individual system.</p>	5.000	Year		0.00	INR Zero Only
2.5	S & F other accessories are as follows: Danger Board of Size 200 mm x 300 mm	1.000	Each		0.00	INR Zero Only
2.51	S/I in position approved make carbon dioxide 4.5 Kgs capacity fire extinguisher, made of high pressure with wheel type valve with one meter long braided high pressure discharge hose	3.000	Each		0.00	INR Zero Only
2.52	GI bucket as per IS, capacity 9 Ltrs filled with sand. (Fire Shield/ Minimax Make).	3.000	Each		0.00	INR Zero Only
2.53	Supplying and fixing 415V 32A TPN Main Switch in Sheet steel enclosure with fuse on angle iron frame on wall. (Make According to MNRE standard)	2.000	Each		0.00	INR Zero Only
2.54	Supply of 1100 Volt grade 4 core 10 sq.mm Aluminium Conductor, XLPE Insulated, Armoured Power Cable. (Make According to MNRE standard)	100.000	R.M		0.00	INR Zero Only
2.55	Laying of 4 core 10 sqmm cable on wall/surface incl. S & F MS saddles with making holes etc. as necy. mending good damages and painting. (Without earthing attachment 10 SWG GI)	90.000	R.M		0.00	INR Zero Only
2.56	Laying of 4 core 10 sqmm cable through existing GI Pipe.	10.000	R.M		0.00	INR Zero Only
2.57	Supplying and fixing compression type gland complete with brass gland, brass ring & rubber ring for dust & moisture-proof entry of XLPE/PVC armoured cables as below : 4 core 10 sq.mm	4.000	Each		0.00	INR Zero Only
2.58	Finishing the end of following XLPE/PVC armoured cables by crimping method incl. supplying and fixing solderless socket (Dowels make), tapes, anticorrosive paste & jointing materials : 4 Core 10 sqmm.	4.000	Set		0.00	INR Zero Only
2.59	Supplying & fixing 32 mm dia medium gauge GI Pipe (ISI- Medium) Protection with necessary fittings and jointing materials as required.	18.000	R.M		0.00	INR Zero Only
2.6	Earthing with 50 mm dia GI pipe 3.64 mm thick x 3.04 Mts. long and 1 x 4 SWG GI (Hot Dip) wire (4 Mts. long), 13 mm dia x 80 mm long GI bolts, double nuts, double washers incl. S & F 15 mm dia GI pipe protection (1 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level driven to an average depth of 3.65 Mts. below the ground level as below	8.000	Each		0.00	INR Zero Only
2.61	Extra for treatment of soil by using salt & charcoal or coke for plate electrode.	8.000	Each		0.00	INR Zero Only
2.62	Supplying & fixing earth busbar of galvanized (Hot Dip) MS flat 25 mm x 6 mm on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc. as required.	1.000	R.M		0.00	INR Zero Only
2.63	Connecting the equipments to earth busbar including S & F GI (Hot Dip) wire of size as below on wall/floor with staples buried inside wall/floor as required and making connection to equipments with bolts, nuts, washers, cable lugs etc. as required and mending good damages: No. 4 SWG	120.000	R.M		0.00	INR Zero Only
2.64	Distribution wiring in 1.1 KV single core stranded 'FR' PVC insulated & unsheathed copper wire in 25 mm size PVC rigid conduit 'FR' incl. necy.fittings as required: 4 x 6 sq.mm + 2 x 4 sq.mm ECC.	10.000	R.M		0.00	INR Zero Only
2.65	SEC H: Glow Sign Board					
2.66	Supply, Fabrication, Fixing and fitting of angle iron frame fabricated from 50mmX50mmx5mm MS L angle with cross angle & radial support including six numbers 6inchesX6inches x10 mm MS base plate for fixing on the structure with all necessary welding & fabrication. the structure shall be proper welding as per instruction of E.I.C including painting as directed by E.I.C	412.500	Kgs		0.00	INR Zero Only

2.67	Supply & Installation of M.S. structure duly fabricated & welded by 50 mm x 25 mm 18g M.S. square pipe ISI mark with red oxide duly welded size:18' x 4' to be made such a manner that it can be opened towards up direction for taking maintenance.	72.000	Sqft			0.00	INR Zero Only
2.68	Supply and fixing ACP back lit LED sign board made 3 mm thick ACP sheet (Alstone / aludecor / Timexbond) finished with approved metallic colour as back ground (Deep Blue) after router cutting. The riser structure also shall be covered with ACP sheet. (Front side ACP sheet) (including 4 side are moulded by ACP) LED board.	72.000	Sqft			0.00	INR Zero Only
2.69	Supply and fixing special type of imported acrylic letter (3 mm thick) projected on the ACP board 50 mm. The letter font shall be in horizontal line.	750.000	Inch			0.00	INR Zero Only
2.7	S&F 230V, .70 Watt LED module inside the acylic sheet letter. One run for each letter including wiring (Make - GOQ/Aries of Samsung chip)	1100.000	Each			0.00	INR Zero Only
2.71	S & F water proof 400 watt power supply system IP65, 50/60Hz frequency, 108 to 305V , AC power supply, 0.85 power factor for LED lamp. (Union/Aries make) = 1 No board	1.000	Set			0.00	INR Zero Only
2.72	Supply And drawing 2 x1.5 sqmm. copper wire for LED module connection and SMPS connection. = 1 No board	87.500	Mtr			0.00	INR Zero Only
2.73	Making brick foundation 4:1 cement motor having dimension 250mmX250mmX500mm with necessary plaster cement finish as per direction of EIC.	4.500	Each			0.00	INR Zero Only
2.74	Transportation cost for taking away the LED sign board from Company's workshop to work site incl loading/unloading.	1.000	Item			0.00	INR Zero Only
2.75	Supply & Fixing of 40mm GI sheet pre coated for back pnale of signage, make - Jindal, Tata, Aaarti, Bhushan or equivalent	72.000	Sqft			0.00	INR Zero Only
2.76	Supply of 2Cx 10 sqmm, 1.1KV Al. armour, XLPE Armoured cable as directed by EIC. (Make:-KEI /Polycab/Havells)	20.000	Mtr			0.00	INR Zero Only
2.77	SEC I: ELEVATOR						
2.78	Supply & Installation of ONE number PASSENGER ELEVATOR WITH MACHINE ROOM, THREE PHASE, G+3, 13 PASSENGERS, SS DESIGNER CABIN WITH FALSE CEILING, and SS AUTOMATIC DOOR WITH ARD & Specification as follows: TECHNICAL SPECIFICATION: NO. OF LIFT: ONE (01); PASSENGER ELEVATOR WITH MACHINE ROOM LOAD/CAPACITY: 13 PASSENGERS (UPTO 884 KGS); TRAVEL: GROUND TO 3RD FLOOR (09 MTR APPROX); SPEED: 0.63 Meter Per Second; STOP & OPENING: FOUR Stops & FOUR Opening (ALL ARE IN SAME); POWER SUPPLY: 440 Volts THREE phase Power Supply; OPERATION: Down Collective control without attendant.; MACHINE POSITION: INSIDE THE SHAFT ABOVE THE GUIDE RAIL.; CAR ENCLOSURE: SS DESIGNER CABIN WITH FALSE CEILING.; CAR FLOORING: PVC Floor Matt; CAR DIMENTION: As per Indian Standard; CAR DOOR: SS AUTO DOOR; LANDING DOOR: SS AUTO DOOR; SIGNALS: Push Button with Digital Display & UP/DN Indication.; HOISTWAY ENTRANCE: AS PER IS STANDERD HOIST/SHAFT: AS PER IS STANDERD; LOP & COP: Acrylic finish & seven segment display; CONTROLLER PANEL: Fully Micro Processor integrated controlled Down collective With Inbuilt fire alarm, Voice announcer, floor announcing system, anti-shock-able gate lock; MACHINE: CE CERTIFIED GEARED MACHINE; CYLINDER TYPE: N/A; ROPE SAFETY FEATURES: Usha Martine Rope; FINAL LIMIT, EMERGENCY STOP.; OVER HEAD REQUIRED: 4200 MM; PIT DEPTH REQUIRED: 1500 MM; EMERGENCY ALERM BELL: YES; UP/DOWN INDICATION AT LANDING: YES; LUMINIOUS CALL INDICATOR: YES; DIGITAL CAR POSITION INDICATOR: YES; TERMINAL LIMIT SWITCH: YES; OVER SPEED PROTECTION: YES; PHASE PREVENTOR: YES; OVERLOAD PROTECTION FOR MACHINE: YES; PHASE FAILURE PROTECTION: YES; REVERSE PHASE PROTECTION: YES; EMERGENCY STOP SWITCH: YES; ARD: YES	1.000	No			0.00	INR Zero Only
2.79	SEC J: Diesel Generator Set						
2.8	Supplying, erecting and commissioning of diesel generating set with alternator of 500 kVA output continuous rating, 3 Phase, 415V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722- 2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising of meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc. and obtaining necessaryapproval from Electrical Inspector as per specification no. GENDG	1.000	Set			0.00	INR Zero Only

3	A. HVAC WORK:					
3.01	Supply of Side Discharge Type DC Inverter Outdoor units equipped with Variable refrigerant flow Cooling only unit comprising all inverter driven Scroll compressor with fully factory charged Eco friendly R-410A refrigerant gas. All the units shall be provided with micro processor based control for sequential starting of condensing units, scanner for fault analysis at ODU, delta design heat exchanger coils, minimum 15 Steps speed control DC motor condenser fan, Electronic expansion valves, inbuild night silent operation, fins with specially factory coated hydrophilic treatment for heat & rust corrosion & condensing units should be capable for outside ambient 52°C. Make: Toshiba 136 HP					
3.01.01	TOSHIBA 20 HP OUD	3.000	Nos		0.00	INR Zero Only
3.01.02	CARRIER 24 HP OUD	1.000	Nos		0.00	INR Zero Only
3.01.03	TOSHIBA 26 HP OUD	2.000	Nos		0.00	INR Zero Only
3.01.04	Indoor units Ductbale 16tr(20 HPr)	6.000	Nos		0.00	INR Zero Only
3.01.05	Indoor units Ductbale, 8.0 TR(10HP)	3.000	Nos		0.00	INR Zero Only
3.01.06	Indoor Units with Corded Remote :	9.000	Nos		0.00	INR Zero Only
3.01.07	Y joints for indoor units (Make-TOSHIBA)	6.000	Nos		0.00	INR Zero Only
3.02	B. LOW SIDE WORKS:					
3.02.01	Installation, Testng & Commissioning of VRF Units, with outdoor mounting, pressure testing, nitrogen flushing and vacuuming etc.					
3.02.02	16HP VRF ODU & indoor	136.000	Nos		0.00	INR Zero Only
3.02.03	Supply & filling of gas charging with R-410A refrigerant as required as per OEM	70.000	Kgs		0.00	INR Zero Only
3.03	REFRIGRANT PIPING:					
3.03.01	Supply, Installation, Testing & commissioning of interconnecting suitable sized as per Drawing / Design - copper refrigerant pipe work duly insulated with (19mm/13mm thick) elastomeric nitrile rubber type tubular insulation between indoor & outdoor units as per specifications.					
3.03.02	41.3 mm O.D.(insulation : 19 mm)	250.000	Ft		0.00	INR Zero Only
3.03.03	38.1 mm O.D.(insulation : 19 mm)	300.000	Ft		0.00	INR Zero Only
3.03.04	31.8 mm O.D.(insulation : 19 mm)	500.000	Ft		0.00	INR Zero Only
3.03.05	28.6 mm O.D.(Insulation : 19mm)	350.000	Ft		0.00	INR Zero Only
3.03.06	25.4 mm O.D.(insulation : 19 mm)	500.000	Ft		0.00	INR Zero Only
3.03.07	22.2 mm O.D.(insulation : 19 mm)	250.000	Ft		0.00	INR Zero Only
3.03.08	19.1 mm O.D.(insulation : 19 mm)	200.000	Ft		0.00	INR Zero Only
3.03.09	15.9 mm O.D.(insulation : 13 mm)	150.000	Ft		0.00	INR Zero Only
3.03.10	12.7 mm O.D.(insulation : 13 mm)	300.000	Ft		0.00	INR Zero Only
3.03.11	9.53 mm O.D.(insulation : 13 mm)	450.000	Ft		0.00	INR Zero Only
3.03.12	6.35 mm O.D.(insulation : 13 mm)	300.000	Ft		0.00	INR Zero Only
3.04	TRANSMISSION & CONTROL WIRING:					
3.04.01	Providing & fixing control cum transmission copper shielded cable in medium duty PVC Conduit between indoor and outdoor units.					
3.04.02	3C x 1.0 Sqmm Cu Cable	4000.000	ft		0.00	INR Zero Only
3.05	DRAIN PIPING:					

3.05.01	Providing & fixing rigid UPVC piping complete with fittings, supports as per specifications and pre insulated with 6mm thick closed cell elastomeric nitrile rubber tubular insulation.					
3.05.02	25mm OD	10.000	Rmt		0.00	INR Zero Only
3.05.03	32mm OD	5.000	Rmt		0.00	INR Zero Only
3.05.04	Supply & Installation of a Y joints for indoor units (Make- TOSHIBA)	7.000	Nos		0.00	INR Zero Only
3.05.05	Lifting, Shifting of ODU unit to suitable location as per drawing	6.000	Nos		0.00	INR Zero Only
3.05.06	Supply and erection of MS ODU platform for VRF ODU	1.000	Ls		0.00	INR Zero Only
3.06	<u>AIR DISTRIBUTION SYSTEMS:</u>					
3.06.01	24 G Ducting for Fresh Air and Treated Air Disbursal into open conditioned Area	180.000	Sqm		0.00	INR Zero Only
3.06.02	Fresh Air Intake Louvers with Chicken wire mesh	6.000	Sqm		0.00	INR Zero Only
3.06.03	Duct Dampers for Air supply	6.000	Sqm		0.00	INR Zero Only
3.06.04	AL Grilles and Diffusers for Distribution of Treated Fresh Air	20.000	Sqm		0.00	INR Zero Only
3.06.05	Inline exhaust fan 700CFM	9.000	Nos		0.00	INR Zero Only
3.07	<u>GSS Duct fabrication& necessary erection only, complete with necessary hangers / supports , with all necessary rod, angle, support etc:</u>					
3.07.01	22 G	1800.000	Sft		0.00	INR Zero Only
3.07.02	24 G	3600.000	Sft		0.00	INR Zero Only
3.07.03	GSS Duct Damper	30.000	Sft		0.00	INR Zero Only
3.07.04	Supply and installation Nitryle Thermal Insualtion for DUCT-9 mm	5400.000	Sft		0.00	INR Zero Only
3.07.05	Aquostic insulation with 12mm thick rigid board and tissue paper	360.000	Sft		0.00	INR Zero Only
3.07.06	Aluminium powder coated Liner air grilles supply with Retwen	360.000	Sft		0.00	INR Zero Only
3.07.07	Canvas canaction	6.000	Nos		0.00	INR Zero Only
4	Fire Fighting works and FDA works					
4.01	Wheeled Carbon Di-oxide Type Fire Extinguisher, ISI Marked (IS16018:2012), CE Certified, Containing CO2 gas having purity 99.7% filled in Seamless Cylinder having approval from Petroleum and Explosives Safety Organisation (PESO), coated with High Glossy PU Paint, ISI marked Dual Spindle Valve with Alumunium Wheel & Collar and inbuilt pressure relief device, Heavy duty rubber hose with metal wire embedded for discharging static electricity during operation, rugged trolley with heavy duty wheel assembly, High durability Vinyl label (3M make), QR Code label with printed serial number CO2 6.5 Kg : IS 16018 (Fire Rating 55B)	27.000	Each		0.00	INR Zero Only
4.02	Supplying and erecting ABC powder type fire extinguisher ISI Marked (IS15683:2018), CE and EN Certified, Pure Polyester Coated Body, Forged brass valve (CE Marked) with in built pressure relief Device and Non Return Valve for pressure gauge port, Stainless Steel safety pin, High durability Vinyl label (3M make), QR Code label with printed serial number, Individually packed in 7 Ply corrugated paper box together with Wall Braket, screws & plugs and service manual as per IS : 13849/15683 of 6 kg capacity with necessary clamp for erection on wall. Stored Pressure (FFire Rating 4A 144 B)	9.000	Each		0.00	INR Zero Only
4.03	Supplying and erecting Mild Steel Fire Sand Bucket with Sand, each set comprises of three sand filled buckets	9.000	Set		0.00	INR Zero Only
4.04	Supplying and erecting Mild Steel Stand for sand buckets including fitting and fixing in position as directed	9.000	Each		0.00	INR Zero Only
5	Total	1.000	Work		0.00	0.00 INR Zero Only
6	GST (18%)	1.000	Work		0.00	0.00 INR Zero Only

7	Labour Welfare Cess (1%)	1.000	Work	0.00	0.00	INR Zero Only
Total in Figures					0.00	INR Zero Only
Quoted Rate in Words		INR Zero Only				