Tender for Extension of wing in Block E at PDEU campus, Gandhinagar

Part – B

General & Special Conditions and BOQ

HCP DESIGN PLANNING AND MANAGEMENT PVT. LTD.
Paritosh, Usmanpura, Ahmedabad – 380 013, Phone: 2755 0875, Fax: 2755 2924.

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NOTICE INVITING TENDERS

1.	Employer	:	**Registered office address:** As per item no 1 of appendix
		:	**Correspondence address:** As per item no 1 of appendix
	Architects	:	As per item no 2 of appendix
	Site	:	As per item no 3 of appendix

2. Item rate tenders are invited on behalf of the Employer for **Tender for Extension of wing in Block E at PDEU campus, Gandhinagar** The total works are required to be completed as mentioned in item no 6 of Appendix of this document.

3. Information about Tender document: As per item no 7 of appendix of this document.

4. Tenders for the work shall remain open for the acceptance for a period of **90** days from the date of **submission** of the tenders.

5. Before quoting the rates, every tenderer is expected to inspect the site of the proposed work and to have satisfied himself as to the nature of all works, all existing roads, water-way and other means of communication and access to and from the site and work and the building that may be required for temporary purposes in connection with the construction, completion and maintenance of the works and must make his own inquiries as to work, yard sites and depot and dumps and as to acquisition of such additional sites and areas as may be necessary for temporary purpose for constructing, completing and maintaining the works. He must ascertain the availability of space for storage of construction materials, water supply, electricity, means of access to the work, nature of work and acquaint himself with all local conditions. A tenderer shall be deemed to have full knowledge of all the relevant documents, samples, site, etc. whether he inspects them or not before submitting the tender.

6. The bidder on the submission of the tender affirms that they have read the entire tender documents and assures that there shall be no objection to any of the tender conditions once the tender is submitted.

7. Persons tendering are informed that no erasures or alterations by them in the text of the document sent herewith shall be allowed and any such erasures or alterations shall be disregarded. If there is any error in writing, no overwriting should be done, the wrong word or figure should be struck out and the correct one written above or neat it in unambiguous way. Each correction should be initialled.

8. **CONTRACTORS TO PLEASE READ THIS CAREFULLY**

a. The rate for items in **Schedule of Items/Quantities** must be given in words and figures. Amount of each item must also be entered in column and grand total of amount must be struck out by the tenderer.

b. If the tender is taken in favour of the company, a power of attorney in favour of the person who may have signed the tender for the company must accompany the tender.
c. The tender document should be initialled by the Contractor.
d. All corrections, erasures and overwriting should be initialled by the Contractor.
e. Discrepancies and Adjustment of Errors:

Any error in quantity or amount in **Schedule of Items/Quantities** showing item or work to be carried out shall be adjusted in accordance with the following rules:

a) In the event of a discrepancy between description in words and figures quoted by a tenderer in the rates column, the description in words shall prevail.
b) In the event of an error occurring in the `amount column of the **Schedule of Items/Quantities** showing items of work, as a result of wrong multiplication of the unit rate and quantity, the unit rate shall be regarded as firm and multiplication shall be amended on the basis of the rate.
c) All errors in totalling in `amount' column in carrying forward total shall be corrected.
d) Any rounding of amount against `items' or in `totals' shall be ignored.
e) Tenderer should go through the whole document and any apparent discrepancy or mistake in the same should immediately brought to the notice of the employer and get the clarification before filling the tender. If the apparent discrepancy is found out at a later stage, Employer's decision will be binding to the contractor.

The tendered sum so altered shall for the purpose of the tender be substituted for the sum originally tendered and considered for acceptance.

9. Employer/Architects reserve the right to reject any or all tenders without giving any reasons, and to waive any deviations which do not constitute a material modification in the tenders received. They also reserve the right to accept any tender and not only the lowest without giving any reasons. Not more than one tender shall be submitted by a Contractor or by a firm of Contractors. No two or more concerns in which an individual is interested as a proprietor and/or partner shall tender for the execution of the same works. If they do, all such tenders shall be liable to be rejected. A tenderer shall submit the tender which satisfies each and every condition laid down in this notice and tender documents, failing which, the tender shall be liable to be rejected.

In addition to the above, the tender shall also be liable to be rejected outright, if:

i) The tenderer proposes any alteration in the work specified or in the time allowed for carrying out the work or any condition or correction made in any code or mode of Schedule of Items/Quantities or Specifications, Conditions of Contract.
ii) any of the page or pages of the tender is/are removed or replaced.
iii) all corrections, additions or pasted slips are not initialled by the tenderer.
iv) Any erasure is made by him in the tender, and

v) The tenderer or in the case of a firm, each partner or the person holding the power of attorney thereof does not sign or signature/s is/are not attested by a witness on the Articles of Agreement of the tender, in the space provided for the purpose.

10. This is an item rate tender only. **Quantity variation shall be unlimited**. A tenderer should quote in figures as well as in words the rate(s) tendered. The amount for each item should be worked out and the requisite total given. Special care shall be taken to write rates in figures as well as in words, and the amounts in figures only and in such a way that interpolation is not possible.

11. The tender documents shall have to be filled in either in ink or by ball pen.

12. **Contractors have to submit the bar chart for the project, List of the Equipments to be deployed on site, List of Key Personnel along with Organization chart, Projected Cash flow, Quality Assurance and Quality Control Plan along with the bid document.**

13. This notice inviting tender shall form part of the contract documents.

14. The bidder on the submission of the tender affirms that they have read the entire tender documents and assures that there shall be no objection to any of the tender conditions once the tender is submitted.

For and on behalf of the Contractor

Date _____ Signature _____

Designation _____

FORM OF TENDER

Dear Sir,

Having examined the Contract conditions, specifications, designs and schedule of items/quantities relating to the works specified in the memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum and having acquired the requisite information relating thereto as effecting the tender, I/We hereby offer to execute the works specified in the said memorandum within the time specified in the said memorandum at the rates mentioned in the attached schedule of items/quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in conditions of tender, the Articles of Agreement, Special Conditions, Schedule of Items/Quantities and conditions of Contract and with such materials as are provided for, by and in all other respects in accordance with such conditions so far as they may be applicable.

Memorandum

1. a) Description of works : **Civil, Plumbing, Electrical, ELV and FFTG works for Extension of wing in Block E at PDEU campus, Gandhinagar, Gandhinagar.Pandit Deendayal Energy University, Near Village Raysan, Gandhinagar**

   b) Earnest money : **Rs. 5,00,000/-**

   c) Time of completion : **As per item no 6 of appendix**

   d) Defect liability period : **As per item no 8 of appendix.**

2. Should this tender be accepted, I/We hereby agree to abide by and fulfil the terms and provisions of the said conditions of Contract annexed hereto so far as they may be applicable or in default thereof to forfeit and pay to **'Pandit Deendayal Energy University,** Gandhinagar ' the amount mentioned in the said conditions.

3. I/We have deposited a sum of **Rs. 5,00,000/-** in the form of DD/Pay order in favour of **Pandit Deendayal Energy University, Payable at Gandhinagar.** Which amount shall not bear any interest. Should I/We fail to execute the contract when called upon to do so, I/We do hereby agree that this sum shall be forfeited by me/us to **PDEU, Gandhinagar.**

4. Till formal Agreement is executed, this tender together with written acceptances thereof, shall constitute a binding contract between the Employer and the Contractor.

5. We accept and agree to the fact that you are not bound to accept the lowest or any tender you may receive.

6. If our tender is accepted we shall obtain guarantee of approved Nationalised Bank to jointly and severely bound with us amounting 10% of the contract value (including earnest money deposit) of the above named sum or any modification thereof as may be mutually decided at the time of signing the contract, being called the contract price, for the due performance of the contract under the terms of a Bond.

7. Our Bankers are:

i)

ii)

The names of Partners of our firm are:

i)

ii)

Name of the Partner of the firm OR

Person having Power of Attorney to sign the contract.(Certified true copy of the Power of Attorney should be attached.)

Yours faithfully

Signature of tenderer

Witnesses :

1) Name : Signature :

Address :

2) Name : Signature :

Address :

PLACE :

DATE :

ARTICLES OF AGREEMENT

ARTICLES OF AGREEMENT made on the ____ day of ____ between **Pandit Deendayal Energy University (PDEU) Gandhinagar,** having its registered office at Registrar Office, PDEU, Post- Raysan, Dist- Gandhinagar. (here in after called "the Employer") of the one part and _____ (hereinafter called "the Contractor") of the other part.

WHEREAS the Employer is desirous of constructing new campus and has caused drawings and specifications describing the works to be prepared by **HCP Design Planning and Management Pvt. Ltd.**, `Paritosh', Usmanpura, Ahmedabad - 380 013, its Architects.

AND WHEREAS the said specifications and the schedule of items/quantities have been signed by or on behalf of the parties hereto.

AND WHEREAS the Contractors has agreed to execute upon and subject to the conditions set forth herein and to the conditions set forth in the Special Conditions and in the schedule of items/quantities and conditions of contract (all of which are collectively hereinafter referred to as "the, said conditions") the works shown upon the said drawings and/or described in the said specification and included in the schedule of items/quantities at the respective rates therein set forth amounting to the sum as therein arrived at or such other sum as shall become payable there under (hereinafter referred to as "the said contract amount")

NOW THIS DEED WITNESSETH and it is hereby agreed and declared as follows:

1. In consideration of the said contract amount to be paid at the times and in the manner set forth in the said conditions the Contractor shall upon and subject to the said conditions execute and complete the work shown upon the said drawings and described in the said specifications and the schedule of items/quantities.
2. The Employer shall pay the Contractor the said contract amount or such other sum as shall become payable, at the times and in the manner specified in the said conditions.
3. The term `the Architect' in the said conditions shall mean the said **HCP Design Planning and Management Pvt. Ltd.**, `Paritosh', Usmanpura, Ahmedabad - 380 013, or, in the event of their ceasing to be the Architect for the purpose of this contract for whatever reason, such other person or persons as shall be nominated for that purpose by the Employer, not being a person to whom the Contractor shall object for reasons considered to be sufficient by the Employer PROVIDED ALWAYS that no person or persons subsequently appointed to be Architect under this contract shall be entitled to disregard or overrule any previous decisions or approval or direction given or expressed in writing by the Architect for the time being.
4. The said conditions and Appendix thereto shall be read and construed as forming part of this Agreement, and the parties hereto shall respectively abide by, submit themselves to the said conditions and perform the Agreements on their part respectively in the said Conditions contained.
5. The agreement and documents mentioned herein shall form the basis of this contract.
6. This contract is neither a fixed lump sum contract nor a piece work contract but is a contract to carry out the construction work in respect of **Tender for Extension of wing in Block E at PDEU**

campus, Gandhinagar to be paid according to actual measured quantities at the rates contained in the schedule of items/quantities and probable quantities or as provided in the said conditions.

7. The Contractor shall afford every reasonable facility for the carrying out of all works relating to civil works, installation of sanitary work and fittings, permanent water supply, electrical installations, fittings, lifts, telephone, air conditioning, and other ancillary works in the manner laid down in the said conditions, and shall make good any damages done to walls, floors, etc., after the completion of such works.

8. The Employer reserves to itself the right of altering the drawings and nature of the work by adding to or omitting any items of work or having portions of the same carried out without prejudice to this contract.

9. Time shall be the essence of this contract and the Contractor hereby agrees to commence the **work soon after the site is handed over to him or from seventh day after the date of issue of formal works order / LOI as provided for in the said conditions** whichever is later and shall faithfully and honestly do, provide, perform, execute, fulfil, keep, discharge, carry out and complete the entire work upon the terms and conditions herein contained and those contained in Contract Documents – as mentioned in item no 6 of Appendix of this document, subject nevertheless to the provisions for extension of time.

10. All payments by the Employer under this contract shall be made only at **Gandhinagar**.

11. All disputes arising out of or in any way connected with this Agreement shall be deemed to have arisen at **Gandhinagar** and only courts in **Gandhinagar** shall have jurisdiction to determine the same.

12. Employer shall not be liable for damages for breach of contract or otherwise to the contractor and the contractor shall not be entitled to any claims, compensation, and damages for breach of contract by the employer.

13. That the several parts of this contract have been read by the Contractor and fully understood by the Contractor.

"IN WITNESS WHEREOF the Employer and the Contractor have set their respective hands to these presents and two duplicates hereof the day and year first hereinabove written.	If the party is a partnership or an individual.
IN WITNESS WHEREOF the Employer has its hands to these presents through its duly authorised official and the Contractor has caused its common seal to be affixed hereinto and the said two duplicates/has caused these presents and the said two duplicates hereof to be executed on its behalf, the day and year first hereinabove written.	If the contractor is a company.

SIGNED, SEALED AND DELIVERED FOR THE EMPLOYER BY the hand of Shri

(name and designation)

in the presence of

1)

2)

If the party is a Partnership firm or an individual should be signed by all or on behalf of all the Partners.

SIGNED, SEALED AND DELIVERED FOR THE CONTRACTOR by

in the presence of

1)

2)

THE COMMON SEAL OF _____ was hereunto affixed pursuant to the resolutions passed by its Board of Directors at the meeting held on
in the presence of

1)

2)

If the contractor signs under its common seal, the signature clause should tally with sealing clause in the Articles of Association. If the Contractors signing by the hand of power of attorney whether a company or individual.

Directors who have signed these tender present in token thereof, in the presence of

1)

2)

in the presence of,

1)

2)

SPECIAL CONDITIONS OF CONTRACT

1. General:

The following special conditions of contract shall supplement the General Conditions of Contract, whenever there is a conflict, the provision herein shall prevail over those in the general conditions of contract.

2.	Amount of Bid Security (EMD)	:	**Rs. 5,00,000/-**
3.	Period for Completion of the Works	:	**As per item no 4 of appendix.**
4.	Value of works of interim certificates	:	**As per item no 19 of appendix.**
5.	Period of honouring certificates	:	**As per item no 21.2 of appendix.**
6.	Period for Final Measurement	:	**As per item no 21.3 of appendix**.
7.	Defects Liability Period	:	**As per item no 8 of appendix.**

8. Equipment & Machinery on Work Site

(a) The Contractor must install fully automatic RMC Batching plant for capacity more than 15 cum/hour with computerized operated system on site All grade of the PCC/Concrete shall be produce by Batching plant and transporter to the site.

(b) If at all contractor opts for providing and laying controlled concrete using RMC from Vendor, the contractor shall have to get the mix design approved by EIC. The design shall be based on using PPC of Ambuja, Ultratech or Birla brand using recommended proportion of admixture as specified in IS-456-2000 for making the concrete pumpable. No additional fly ash / cementecious material shall be added or replaced at plant while using PPC. No extra cost shall be paid for providing RMC.

(c) The contractor shall install material hoist way, passenger hoist way, tower crane and required concrete and material transporting equipment's, etc.

(d) Following quality control measures shall have to be taken by the contractor :

d.1 Only approved quality mould releasing agent shall have to be applied on the formwork, no oil or grease of any type shall be allowed to applied to the form work to facilitate the smooth release of formwork during de- shuttering.

d.2 Concrete surfaces like slabs shall have to be covered with plastic sheet as the laying of concrete progresses.

d.3 Specified quantity of plasticizer is to be considered in the mix design. The company of the plasticizer and its proportion is to be specified by the agency who is giving the mix design.

d.4 All types of cement mortars produced for the work shall be machine mixed (Smaller capacity mixer machines shall have to be arranged for this.)

(e) Mechanically operated hoists or lift, JCB Hydra, electrically operated Winch, welding machines, Oxy-Acetylene cutting sets, and Mobile Tower Crane of required boom radius and capacity, for erection and fabrication of steel structures and materials to reach the highest level of building, powered by suitable machinery capable of lifting.

(f) Immersion type and surface type vibrators for consolidation of concrete of any grade and at all stages.

(g) Sufficient quantity of metal scaffolding material and requisite steel adjustable props having required spans of required strength adjustable clamps, turnbuckles etc.

(h) Sufficient quantity of steel plates or plywood shuttering material as well as wooden/steel rafters having required spans of required strength, adjustable clamps, turn buckles etc. Contractor shall have to submit the shop drawings for the enabling structures like staging, formwork etc. and get the approval thereof before execution.

(i) Testing equipments for testing to concrete / sand, aggregate, gravel, mortar, embankment, welds, etc. as required is including small compression testing machine. Adequate nos. of moulds for concrete and cement.

(j) Water pumps for dewatering from pits, trenches and equipments for supplying curing water during at high level portions of buildings.

(k) Compressor, jack hammer, drilling bits, welding machine, loader for excavated materials, dumpers, caterpillar, bulldozer, road roller etc.

(l) Vacuum dewatering system equipment for Grade R.C. floor, roads etc. with necessary equipment for floating and finishing coat. This must not be subcontracted.

(m) Or any other tools / tackles / equipment necessary for the satisfactory and successful execution and timely completion of the project, if necessary for the statutory requirements.

9. Schedule of Materials

9.1 Rates including cost of cement and reinforcement steel

Cement and Reinforcement Steel will be supplied by the contractor at site. **Rates to be quoted by the contractor shall be inclusive of the cost of cement, reinforcement and structural steel.**

The total responsibility of unloading, storage, safe custody, accountability, testing etc. will be of the contractor. On completion of the work contractor will have to submit a detailed reconciliation statement of cement & steel. Allowable wastage considerations and penalties for the reconciliation of cement and reinforcement steel shall be applicable as follows:

a) Cement

On completion of work the theoretical consumption shall be worked out. If the actual consumption of cement exceeds the theoretical by more than 2.5%, then the excess of the cement consumed above 2.5% shall be recovered at an enhanced rate, i.e. double the prevailing market rate. If the actual consumption of cement is less than the theoretical up to 2.5%, then contractor shall adequately explain with proper reasons. The contractor is advised to analyse the cement consumption co-efficient during initial stages of work, so that the variation from the theoretical consumption can be adopted for the balance work. However, if no such analysis is done and adequate reasons for negative consumption are not found, the penalty shall be imposed on the contractor, i.e. prevailing market rate shall be recovered for each bag negatively consumed than the theoretical up to 2.5% and double the prevailing market rate for each bag negatively consumed than the theoretical by more than 2.5%.

b) Mild steel & Tor steel

Maximum wastage permitted will be 2% of the theoretical consumption. If the wastage is more than 2% of the steel billed for, then the excess wastage above 2% limit shall be recovered at an enhanced rate i.e. double the market rate.

Rolling margin if recorded by the contractor by testing all categories of reinforcement and structural steel for all supply lots then **only considered for the reconciliation**.

10.3 Following rates are to be considered as basic rates for arriving at the tender rates to be quoted by the bidder.

1)	**Cement**	**: Rs. 350.00 per bag.**
2)	**Reinforcement Steel**	**: Rs. 70,000.00 per MT**
3)	**Structural Steel (Rolled Section, Hollow Section, Plates & Similar)**	**: Rs. 70,000.00 per MT**
4)	**Vitrified Tiles**	**: Rs. 60 per Sq.ft**

Given basic rates are inclusive of all types of taxes, levies, loading, transit insurance, transportation, unloading and delivery at site.

Contractor shall have to inform and get approval of client in writing about the purchase rates and source of supply of the items listed under basic rate items well in advance / at least one month before placing the order. Material shall be purchased directly from the company only.

Client reserves the right to negotiate and finalise the rates of the items listed under basic rate items directly with the supplier company. The rates thus finalized shall be termed as **negotiated rates** (inclusive of all types of taxes, levies, loading, transit insurance, transportation, unloading and delivery at site.) and the same shall be binding to the contractor for further process of execution. Contractor has to execute the relevant item considering the negotiated rates as final rate and during execution of such item the contractor has to prepare the statement of basic rate difference **(as prescribed in Annexure-A below)** which shall be supported by the authentic documents as required.

The difference of basic rate and negotiated rate of the items listed under basic rates only shall be considered for the payment or recovery as per **Annexure – A (below).** No other component shall be considered for payment or recovery, except the component of material listed under basic rate item

ANNEXURE – A

Sr. No	Item	Unit	Basic Rate as per tender (a)	Negotiated rates (b)	Rate Difference c = b-a	% difference with basic rate d = c / a	Total executed quantity as per RA or Final bill (Theoretical or actual consumption whichever is less shall be considered) e	Amount of basic rate difference payable or recoverable +ve or –ve f= c * e
1								
2								
3								
4								
Total								

11. Contractor shall also provide temporary office for the Owner's staff at site having at least 75 sqm of total area consisting of staff area with common toilet, wash basin & cooler point, Site in Charge's office with attached toilet and AC point, one meeting room and necessary electrical points and fittings etc. as per drawing. After completion of the project, all the materials used for the same, shall be contractor's property. The design of the same shall be provided by the consultant.

12 Testing of Cement / Steel supplied by Owner/Contractor

For the supply of materials by Client/contractor, it shall be contractor's duty to arrange for the test samples of cement & steel for every separate consignment that shall be received by the contractor at site or as directed by the Engineer-in-Charge. Contractor will not be reimbursed amount of such bills of test reports carried out at recognised technical institute or laboratories. Other sundry expenditure like transport, handing over of samples, packing and getting test results, even by deputing his special personnel will also be borne by the contractor.

13. The quantity for measurement will be actual quantity used in construction (which will be calculated on the basis of standard steel co-efficient). **Rolling margin, invisible loss and wastage shall not be paid or billed.**

I) The contractor shall bear all incidental charges for the storage and safe custody of the materials at site at his own responsibility.

II) The contractor shall make arrangement at the site of works for safe custody of materials to protect from damage by rain, dampness, fire, theft etc.

III) In case any materials get damaged the contractor shall replace the same at his own cost.

IV) The contractor shall furnish to Engineer-in-Charge sufficiently in advance a statement showing his requirements of quantities of materials to be supplied by Owner if any and the time when the same will be required by him.

V) A day to day account of the material supplied by Owner/Contractor shall be maintained by the contractor in the prescribed Performa like Pour Card etc.

VI) Only that quantity of steel and reinforcing steel, which is shown in the drawings as finished/fabricated steel, will be measured. No wastage, cutting margins, materials used as laps etc. shall be measured for payment. However, approved laps, chairs and spacers in reinforcing steel be measured.

VII) Rate of formwork shall be inclusive of desired size and shape. Rates are also inclusive of forming grooves of required size and shape, forming pattas, patterns, rendering etc. Exposed shuttering also includes finishing, rendering of the same, including making, fixing tie rod assembly for retaining wall / water retaining structures / underground structures (made out of 8mm 2nos tor steel bars with spring and PVC cone) & 25 mm deep PVC cones on either side of heavy quality pvc pipe for structures other then mentioned above to act as a spacer and filling and finishing the holes using cement and sand mortar(1:1) with polymer bonding agent, as directed by EIC after deshuttering.

14. Dewatering.

Rate quoted for various items in schedule of quantities, should include cost of dewatering by any means and at all stages, which may be from underground or surface water sources. Contractor will not be paid anything extra for dewatering.

15 Application codes for Specification of Civil Works.

The following codes, standards are part of the specifications mentioned/covered under this contract. All standards, tentative specifications, codes of practice referred to herein shall be the latest edition including all applicable official amendments and revisions.

In case of discrepancy between tender and those referred to herein, IS Specification shall govern.

IS 1077- Common burnt clay-building bricks.
IS 2502- Code of practice for bending & fixing of concrete reinforcement.
IS 1905- Structural safety to building.
IS 1786- Specification for cold twisted steel bars for concrete reinforcement.
IS 3495 - Methods of sampling & testing clay building bricks. (Part I to IV)
IS 2212- Code of practice for brickwork.
IS 2394- Code of practice for application of lime plaster finish.
IS 1443- Code of practice for laying and finishing of cement concrete flooring tiles.
IS 4021- Timber door, window and ventilator frames.
IS 2202- Wooden flush door shutters (solid care) Type Part I
IS 1003- Timber panelled and glazed shutters part I&II
IS 4020- Methods of tests for wooden flush doors, the test.
IS 1081- Code of practice for fixing and glazing of metal (steel & aluminum) doors, windows and Ventilators.
IS 2338- Code of practice for finishing wood and wood base materials (part-I)

IS 2395- Code of practice for painting concrete, masonry and plaster surface.
IS 1346- Code of practice for water proofing of roofs with bitumen felts.
IS 783 - code of practice for laying concrete pipes.
IS 1200- Method of measurement of building works.
IS 3764- Safety code for excavation work.
IS 2720- Part-II- Determination of moisture content.
-Part-VII-Determination of moisture content dry density relation using light compaction.
-Part-VIII-Determination of moisture content dry density relation using heavy compaction.
-Part- XXVIII-Determination of dry density of soils, in place by the said replacement method.
-Part-XXIX-Determination of dry density of soils in place by the core cutter method.
IS 383 - Specification for coarse and fine. Aggregates from natural sources for concrete.
IS 23856 - Parts I to VIII- methods of test for aggregates.
IS 516 - Methods of test for strength of concrete.
IS 1199- Methods of sampling and analysis of concrete.
IS 3025- Method of sampling and test for water.
IS 432 - Part I & II- Mild and Medium tensile steel bars and hard drawn steel wire, for concrete Reinforcement.
IS 4990- Specification for plywood for concrete shuttering work.
IS 2645- Specification for integral cement waterproofing compounds.
IS 2505- Specification for concrete vibrators, immersion type.
IS 2750- Specification for steel scaffoldings
IS 3370- Part I to IV- code of practice for concrete structures for storage of liquids.
IS 456 - Code of practice for plain & reinforced cement concrete.
IS 9013- Specification for admixtures for concrete.
IS 3414- Code of practice for design and installation of joints in buildings.
IS 4014- Parts I & II –code of practice for steel tubular scaffolding.
IS 2571- Code of practice for laying in site cement concrete flooring.
IS 3385- Code of practice for measurement of civil Engg. Works.
National Building code of India- 1970 . (All Parts).
IS 73 - Specification for paving bitumen.
IS 226 - Specification for Structural Steel.
IS 460 - Specification for test sieves.
IS 10262 – Code for concrete mix design.

16 Clearance of site on completion.

On completion of the works, the contractor shall clear away and remove from the site, all constructional plant, surplus materials, rubbish and temporary works of every kind and leave the whole site and works clean and in workman like condition to the satisfaction of Owner at his own cost. If the contractor fails to clear the site within 7 days after virtual completion/ submission of final bill whichever is earlier, it shall forfeit all his claims and the owner may get the site cleared at contractor's cost.

17 **Scope of work: As per item no 05 of appendix.**

18 Site in Charge – Client, will provide operative instructions on regular basis related to project during contract execution period, which are not covered in this tender document. Contractor and his staff at site shall comply all these instructions..

19. **Taxes:** The rates shall also be fixed and not subject to exchange variations, labour conditions, fluctuations in railway freights or any conditions whatsoever. It shall also include for GST and any other taxes/duty or other levy levied by the Central or State Governments or local authorities, GST on works contract (if applicable) as on the date of signing of the tender document. No claim in respect to the variation in above mentioned taxes shall be considered for payment, by the Employer

20. Owner reserves the right, at its sole discretion, to offer the same contractor, at the same rates and on the same terms and conditions, additional work. If the owner and the contractor agree for the same terms and conditions, the owner may award to the same contractor and the contract shall be in writing and signed by both the owner and contractor.

21. "Owner / Employer" and "Contractor" may very/alter/modify/rescind/waive any terms and condition of this contract by mutual consent. The mutual consent shall be in writing and signed by both "Employer" and "Contractor".

22. Barricading: Contractor has to barricade the area with GI corrugated sheets for the complete safety of the persons using the adjacent campus and surrounding areas. If required, the contractor has to shift the barricading after completion of the specific work as per the instruction of Engineer in Charge. The indicative drawing for the same is attached with the tender document.

23. All or any disputes arising out of the agreement, undertaking and work order issued, under this tender shall be subject to Arbitration and referred to a single arbitrator as per the provisions of Arbitration and Conciliation Act, 1996 and any subsequent amendment, thereof. The parties on mutual consensus shall be at liberty to appoint any person as sole arbitrator and if there is no consensus then the same shall be appointed under the provisions of Arbitration and Conciliation Act, 1996 and any subsequent amendment, thereof. The place of arbitration shall be at Gandhinagar and the language of the arbitration will be in English.

GENERAL CONDITIONS

1. Interpretations :

In constructing these Conditions, the Specifications, Schedule of Items/Quantities and Contract Agreement, the following words shall have the meanings herein assigned to them except where the subject or context otherwise requires.

a) "Owner/Employer" Shall mean **Pandit Deendayal Energy University (PDEU) Gandhinagar** and shall include its successors, legal representatives and assigns.

b) "Contractor" "Contractor" shall mean the tenderer (person or persons, firm or company), selected by the Owner for the performance of the work and shall include the successors, legal representatives and permitted assigns of the Contractor.

c) "Site" shall mean the site of the contract works including any building and erections thereon and any other land (inclusively) as aforesaid allotted by Employer for the Contractor's use.

d) "This Contract" shall mean the Articles of Agreement the General and Special Conditions, the Appendix, the Annexure, the Schedule of Items/Quantities and Specifications attached hereto and duly signed.

e) "Notice in Writing "or written notice shall mean a notice in written, 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 or 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.

f) "Act of Insolvency"shall mean any Act of Insolvency as defined by the Presidency Towns Insolvency Act or any Act amending such original.

g) "Net Prices" If in arriving at the contract amount the Contractor shall have added to or deducted from the total of the items in the Tender any sum either as a percentage or otherwise then the net price of any item in the tender shall be the sum arrived at by adding to or deducting from the actual figure appearing in the Tender as the price of that item a similar percentage or proportionate sum provided always that in determining the percentage or proportion of the sum so added or deducted by the Contractor the total amount of any Prime Cost items and provisional sums of money shall be deducted from the total amount of the tender. The expression "net rates" or "net prices" when used with reference to the contract or accounts shall be held to mean rates or prices so arrived at.

h) "Time limit/ shall mean the period in which the construction work is stipulated to be completed.

Stipulated time/

Stipulated date"

i) The Engineer-in-charge – means the Engineer officer who shall supervise and be in – charge of the work and who shall sign the contract on behalf of client.

j) Excepted Risk are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of Institute, damages from air-crafts, acts of God, such as earth-quake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or which a certificate of completion has been issued or a cause solely due to Institute's faulty design of works.

k) Market Rate shall be rate as decided by the Engineer-in-Charge on the basis of the cost of materials and labour at the site where the work is to be executed, all overheads and profits.

l) Tendered Value means the value of the entire work as stipulated in the LOI.

2. General:

a. In the specifications "as directed"/"approved" shall be taken to mean "as directed"/"approved" by the Engineer-in-charge and Architects.

b. Wherever a reference to any Indian Standard appears in the specifications, it shall be taken to mean as a reference to the latest edition of the same in force on the date of agreement.

c. The distance which constitutes lead shall be determined along the shortest practical route and not necessarily the route actually taken. The decision of the Engineer-in-charge and Architects in this regard shall be taken as final. Where no lead is specified, it shall mean "all leads".

d. Lift shall be measured from plinth level.

e. Reference to specifications of materials as made in the detailed specification of the item of works is in the form of a designation containing the number of the specification of the material and prefix `M' e.g. `M-5'.

f. No materials shall be stored prior to, during and after execution of a structure in such a way as to cause or lead to damage or overloading of the various components of the structure.

g. All works shall be carried out in a workman like manner as per the best techniques for the particular item.

h. The mode, procedure and manner of execution shall be such that it does not cause damage or over-loading of the various components of the structure during execution or after completion of the structure.

i. Special modes of construction not adopted in general Engineering practice, if proposed to be adopted by the Contractor, shall be considered only if the Contractor provides satisfactory evidence that such special mode of construction is safe, sound and helps in speedy construction and completion of work to the required strength and quality. Acceptance of the same by the Engineer-in-charge shall not, however absolve the Contractor of the responsibility of any adverse

effects and consequence of adopting the same in the course of execution for the completion of the work.

j. All installations pertaining to water supply and fixtures thereof as well as drainage lines and sanitary fitting shall be deemed to be completed only after tests of their satisfactory functioning have been carried out by the Contractor and the same have been approved by the Engineer-in-charge.

k. The Contractor shall be responsible for observing the rules and regulations imposed under the "Minor Minerals Act" and such other laws and rules prescribed by Government from time to time.

l. The testing charges of all materials shall be borne by the Contractor. Unless recovery at one percent towards testing charge is separately made.

m. Approval to any of the executed items for the Work does not in any way relieve the Contractor of his responsibility for the correctness, soundness and strength of the structure as per the drawings and specifications.

3. **Competency of the Tenderer:** No contract shall be awarded except to responsible bidders capable of performing the class of work contemplated. Before the award of the contract, any bidder may be required to show that he has the necessary facilities, experience, ability and financial resources to perform the work in satisfactory manner within the time stipulated. **Contractor may be required to furnish to the Employer, with a statement, as to their experience and their financial status.**

4. Total Retention including Security Deposit :

Total Security Deposit	: As per item no 10 of appendix.
Release of Security Deposit	: As per item no 11.1 to 11.4 of appendix.
Total Retention Money	: As per item no 12 of appendix.
Release of Retention Money	**:** As per item no 13 of appendix.
Total Retention	: As per item no 14 of appendix

The amount retained by the Employer shall not bear any interest. All compensation or other sums of money payable by the Contractor to the Employer under the terms of this contract may be deducted from his Earnest Money and Security Deposit. Unless such deposit has become otherwise payable, the Contractor within ten days shall make good in cash the amount so deducted.

5. Conditional tender shall not be OPENED / ACCEPTED.

6. Scope of Contract: The Contractor shall carry out and complete all the work strictly, in every respect, in accordance with the Contract, drawings, specifications, details and with the directions of and to the satisfaction of the Architect and their Associate Consultants. The Architect may in his absolute discretion and from time to time issue further drawings as per the requirement of the execution and/or written/verbal instructions, details, directions and explanations which are hereafter collectively referred to as "Architect'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 or between the Schedule of Items/Quantities and/or Drawings and/or Specification.

c. The removal from the site of any materials brought thereon by the Contractor and the substitution of any other material there for.

d. The removal and/or re-execution of any defective works and opening up for inspection of any covered work executed by the Contractor.

e. The dismissal from the works of any persons employed thereupon.

f. In case of verbal instructions, directions and explanations given to the Contractor or his representatives upon the works by the Architect shall, if involving a variation, be confirmed in writing by the Contractor within Seven days, and if not dissented from in writing within a further seven days by Architect's such shall be deemed to be Architect's Instructions, within the scope of the Contract.

All work shall be in compliance with the requirements of the local public authorities. If in the opinion of the Architect and the Consultants, changes have to be made, the Contractor shall carry out the same without any extra charges. The Architect's decision in such cases shall be final and shall not be open to arbitration. No change in the drawings is permitted without Architect's written consent. The Contractor shall carry out and complete the said work in every respect in accordance with this Contract.

7. **Tender document, Schedule of items/quantities and drawings :** The Contractor shall be entitled to the certified copy of the accepted tender along with the work order, free of cost and shall also be entitled to receive, on request, two sets of contract and working drawings according to the progress of work as and when needed, free of cost. The Contractor shall keep one copy of all the drawings on the works and the Architect or his representative shall have, at all times, access to the same.

The several documents forming the contract are essential parts of the contract and requirements occurring in one are a binding as through occurring in all. They are intended to be mutually explanatory and complementary and to describe and provide for a complete work. The contract shall remain in the custody of the Architect and shall be produced by him at his office when required by the Employer or the Contractor.

In the event of any discrepancy in the several documents forming the contract or in any one document, the following order of precedence should apply:

Dimension and quantities: (i) Drawings (ii) Schedule of Items/Quantities of the Tender form (iii) Specifications. On drawings, figured dimensions, unless obviously incorrect, shall be followed in preference to scaled dimensions.

Description: (i) Schedule of Items/Quantities of the Tender form; (ii) Drawings (iii) Specifications. In the case of defective description or ambiguity or any discrepancy in the item specifications or in absence of specifications for any items, the Architect and Engineer-in-Charge is entitled to issue further instructions directing in what manner the work is to be carried out or work shall be carried out as per specifications in the latest IS code. The Contractor cannot take any advantage of any apparent error or omission in drawings or specifications and the Architect and Engineer-in-Charge

shall be entitled to make corrections and interpretations as necessary to fulfil the plans and specifications.

Before the issue of the final certificate to the Contractor, the Contractor shall forthwith return to the Architect, all documents, drawings and specifications.

8. **Contractor to provide everything necessary :** The Contractor shall provide at his cost everything necessary for the proper execution of the works according to the intent and meaning of the Drawings, Schedule of Items/Quantities and Specifications taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from, and if the Contractor finds any discrepancy in the Drawings or between the Drawings, Schedule of Items/Quantities and Specifications he shall immediately and in writing refer same to the Architect who shall decide which is to be followed.

9. **Work not to be sublet:** The Contractor shall not assign or sublet any portion of the contract except with the written consent of the Employer/Architect. In case of breach of these conditions, the Employer may cause the Architect to serve a notice in writing to the Contractor rescinding the contract whereupon the security deposit shall stand forfeited to the Employer, without any prejudice to his other remedies against the Contractor.

10. No alteration, omission or variation shall vitiate this contract but in case the Architect thinks proper at any time during the progress of the works to make any alterations in, or additions to, or omissions from, the works or any alteration in the kind or quality of the materials to be used therein and shall give notice thereof in writing under his hand to the Contractor, the Contractor shall alter, add to, or omit from, as the case may, in accordance with such notice, but the Contractor shall not do any work extra to or make any alterations or additions to or omissions from the works or any deviation from any of the provisions of the Conditions of the contract, stipulation, specifications, Schedule of Items/Quantities or contract drawings without the previous consent in writing of the Architect and the value of such extras, alterations, additions or omissions shall in all case be determined by the Architect with the prior approval in writing of the Employer in accordance with the provisions of relevant clause, and the same shall be added to, or deducted from, the contract amount, as the case may be, accordingly.

    Any error in description or in quantity or in omission of items from the Schedule of Items/Quantities shall not vitiate this contract but shall be rectified and the value thereof, as ascertained under relevant clause, shall be added to, or deducted from the contract amount (as the case may be) provided that no rectification of errors, if any, shall be allowed in the Contractor's schedule of rates.

11. A schedule of probable quantities in respect of each work and specifications accompany these special conditions. Quantities indicated in the Form of Schedules of Rates with respect to various items are only approximate and are intended merely as information without undertaking as to the correction thereof and without any obligation upon the Owner. This schedule is liable to alteration by omission, deductions or additions at the discretion of the Employer/Architect and not subject to any discussions. The Contractor shall carry out any such items with variations in the quantities at the tender quoted rate. Each tender should contain not only the rates but also the value of each item of work entered in a separate column and all the items should be totalled in order to show

the aggregate value of the entire tender. Every `blank' in the form of the tender and in the schedule must be filled up by the tenderer and must return the document sent herewith.

12. The tenderer must obtain for himself at his own responsibility and expense all the information which may be necessary for the purpose of making a tender, for entering into a contract, examining the drawings and all matters appertaining thereto. The Contractors shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the prices stated in the Schedule of Items/Quantities, which rates and prices shall cover all his obligations under the Contract, and all matters and things necessary for the proper completion of the works.

The information given in the tender documents and the Plans and Drawings forming part thereof is merely intended as a general information without undertaking on the part of the Employer as to their accuracy and without obligation relating thereto upon the Employer. The tenderers are expected to conducted their own surveys and investigations prior to tendering.

The Contractor shall confirm to the provisions of any Act of the legislature relating to the works, and to the regulations and bye laws of any authority, and of any water, electric supply, other companies and/or authorities with whose systems the structure is proposed to be connected, and shall, before making any variations from the Drawings or Specifications that may be necessitated by so conforming, give to the Architect written notice, specifying the variation proposed to be made and the reason for making it and apply for instructions thereon. In case the Contractor shall not within ten days receive such instructions he shall proceed with the work confirming to the provisions, regulations, or bylaws in question, and any variation so necessitated shall be dealt with under relevant clause.

The Contractor shall bring to the attention of the Architect all notices required by the said Acts, regulations or bylaws to be given to any authority and pay to such authority, or to any public office all fees that may be properly chargeable in respect of the works, and lodge the receipts with the Architect.

The Contractor shall indemnify the Employer/Architect/ Consultants against all claims in respect of patent rights, and shall defend all actions arising from such claims, and shall himself pay all royalties, license fees, damages, cost and charges of all and every sort that may be legally incurred in respect hereof.

13. **Supply of plants, equipment, formwork, centering, temporary roads, lighting etc. :** The rates quoted in the tender shall include for cleaning of the site before commencement and after completion of the works, for the proper fencing, lighting, grading and taking of the necessary safety measures for all works comprised in the contract and for the proper provision of temporary road, way, foot-ways, guards, fences, caution notices etc., also for the accommodation of workmen, foot passenger or other traffic and of Employer/s and occupiers of adjacent property and the public and shall remain responsible for any accidents that may occur on account of his failure to take proper & timely precautions.

The Contractor shall not set fire to any standing jungle, trees, brushwood or grass without a written permit from the Architect, Engineer-in-Charge and Forest officer. When such permit is given, and also in all cases when destroying cut or dug up trees, brushwood, grass etc. by fire, the

Contractor shall take necessary measures to prevent such fire spreading to or otherwise damaging surrounding property.

Contractor shall supply at his own cost all materials (except such special materials if any, as may, in accordance with the contract to be supplied by the Employer), plant, tools, appliances, implements, ladders, cordage, tackle, scaffolding and any temporary works which may be required for the proper execution of the work whether in the original, altered or substituted from and whether included in the specifications, or other documents forming part of the contract or referred to in these conditions or not and which may be necessary for the purpose of satisfying or complying with requirements of the Architect and Engineer-in-Charge as to any matter or to which under these conditions he is entitled to be satisfied or which he is entitled to required together with carriage therefore to and from the work.

Erection of all formwork, staging, timbering, shoring etc. as well as taking down and removal of the same when ordered to do so shall be included. The rates quoted shall be inclusive of fully reinstating and making good all matters and things disturbed during the execution of the work and to the satisfaction of the Architects.

All the arrangements made for fencing and lighting shall be maintained by the Contractor throughout the execution of the contract till the physical taking over of the work by Employer.

14. **Setting out the works:** The Contractor shall supply without additional charges the requisite number of persons with the means and material necessary for the purpose of setting out works and checking, weighing and assisting in the measurement or examination at any time and from time to time, of the work or the materials. Failing this, the same may be provided by the Architect and Engineer-in-Charge at the expense of the Contractor and the expenses may be deducted from any money due to the Contractor under the contract or from his security deposit, or proceeds of sale thereof, or of a sufficient portion thereof.

The Contractor shall then set out the works and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof and for provision of all necessary instruments, appliances and labour in connection therewith. The Contractors shall submit to the Employer and Architects on the site plan recorded levels, contours, margins and the verifications of layout within seven days from the date of getting site layout from Architects/Employers.

If at any time any error in this respect shall appear during the progress of the works or within a period of one year from the completion of the works, the Contractor shall, if so required, at his own cost rectify such error to the satisfaction of the Architect. If however, such error is based on incorrect data supplied in writing by the Architect and Engineer-in-Charge, the expenses of rectifying the same shall be borne by the Client.

The checking of any setting out or of any line or level by the Architect and Engineer-in-Charge or their representative shall not in any way relieve the Contractor of responsibilities, for the correctness thereof. The Contractor shall carefully protect and preserve all bench-marks, site nails, page and other things used in setting out of the work.

Necessary trial pits, of size 5' x 5' x 5', at minimum two locations on the entire site, shall be done by the Contractors at their own expense and the report thereof showing different strata with

respective bearing capacities and the same shall be submitted to Employers/ Architects/ Consultants. No extra charges shall be paid for the same.

15. **Item rate tender :** The Contractor should note that unless otherwise stated the tender is strictly on item rate basis and his attention is drawn to the fact that the rates for each and every item should be correct, workable and self supporting. Quantity variation shall be unlimited. The rates shall also be firm and not subject to exchange variations, inflation, labour conditions, fluctuations in railway freights or any conditions whatsoever. It shall also include for sales tax, excise duty, octroi and any other taxes/duty or other levy levied by the Central or State Governments or local authorities, sales tax on works contract if applicable. No claim in respect to the above mentioned shall be entertained by the Employer.

1. **Time limit:** Time shall be the essence of the contract. Time allowed for carrying out the work as mentioned in the memorandum shall be strictly observed by the Contractor and it shall be reckoned from the 7th day after written order to commence the work is issued. The tenderer shall, before commencing work, prepare a detailed work schedule, which shall be approved by the Architect and the Employer. This schedule shall be strictly followed by the Contractor.

17. **Liquidated damages / Penalty :** If the Contractor fails to complete the works by the date stated in the Appendix or within any extended time under relevant clause and if the Architect certifies in writing that in his opinion the same could be reasonably completed, the Contractor shall pay the Employer the sum named in the Appendix as "Liquidated Damages/ Penalty for delayed" for the period during which the said works shall so remain incomplete and the Employer may deduct such damages from any moneys due to the Contractor, in the following manner :

Penalty for delay in completion of time: As per item no 20.1 of appendix.

If in the opinion of the Architect the works are delayed

(a) By force majeure or

(b) Due to exceptionally inclement weather or

(c) due to delay in proceedings or any dispute with adjoining owners or public authorities arising otherwise than through the Contractor's own fault or

(d) by delay in works of other Sub-contractors or tradesmen engaged/nominated by the Employer or the Architect and not referred to in the Schedule of Items/Quantities and/or Specification or

(e) by reason of Architect's instructions as per relevant Clause or

(f) by reason of civil commotion, local combination of workmen or strike or lockout affecting any of the building trades or

(g) in case of the Contractor not receiving in due time necessary instructions from the Architect for which he has specifically applied in writing or

(h) in the event, the value of the work exceeds the value of the priced Schedule of Items/Quantities owing to variation,

(i) Due to delay in supply of materials by the Employer (if applicable).

The Architect may, with the previous approval in writing of the Employer make a fair and reasonable extension of time for completion of the contract works. In case of such strike or lockout

the Contractor shall give written notice to the Architect immediately. But the Contractor shall nevertheless constantly use his endeavours to prevent delay and shall do all that may be reasonably required to the satisfaction of the Architect to proceed with work.

18. The Contractor shall furnish, within three days (unless extended by the Architect and Engineer-in-Charge) of the order to start the work, the progress schedule in quadruplicate indicating the date of starting, the monthly progress expected to be achieved and the anticipated completion date of each major item of work to be done by him also indicating dates of procurement and setting up the materials, plants and machinery. The Schedule should include a statement of proposed general and detailed arrangements for carrying out works, and of time, order and manner in which it is proposed that these shall be executed. Necessary reports endorsed by the Site Engineers consisting of the labour strength and the materials shall be regularly furnished to the Employer and Architects every week. The Contractor shall include the programme for the forth-coming week in the same report.

The schedule should be formed keeping in view the time limit and the achievement towards completion of the work within the time limit and of the particular items on the dates specified in the contract and shall have the approval of the Architect and Engineer-in-Charge. Further, the dates for the progress, as in this schedule shall be adhered to.

In case it is found necessary, at any stage, to alter the schedule, the Contractor shall submit in good time, a revised schedule incorporating necessary modifications proposed and get the same approved from the Architect and Engineer-in-Charge. No revised schedule shall be operative without such acceptance in writing. The Architect and Engineer-in-Charge in further empowered to ask for more detailed schedule or schedules, say, week by week, for any item or items and the Contractor shall supply the same as and when asked for.

The Architect and Engineer-in-Charge shall have, at all times, the right, without in any way vitiating this contract forming grounds for any claim, to alter the order of the work or any part thereof and the Contractor shall after receiving such direction, proceed in the order directed. The Contractor shall also revise the progress schedules accordingly and submit four copies of the revised schedule to the Architect and Engineer-in-Charge within seven days of the said Engineer's direction to alter the order of works.

The Contractor shall furnish sufficient plant, equipment and labour and shall work such hours and shifts as may be necessary to maintain the progress of the work as per approved progress-schedule. The working and shift hours shall comply with all Government regulations in force and shall be such, as may be approved by the Architect and Engineer-in-Charge and the same shall not be varied without the prior approval of Architect and Engineer-in-Charge.

The Contractor shall from time to time, as may be required by the Architect and Engineer-in-Charge, furnish the Architect and Engineer-in-Charge with a statement in writing of the arrangements he proposes to adopt for the execution of this contract and the Architect and Engineer-in-Charge may, if he considers necessary at any time advise alteration in the same, which the Contractor shall adopt on notice thereof.

The progress-schedule(s) shall be in the form of CPM/PERT, forms, statements and/or reports as may be approved by the Architect and Engineer-in-Charge. The Contractor shall submit four copies

showing the progress of the work in the form of a chart etc. at periodical intervals as may be specified by Architect and Engineer-in-Charge.

The approval of the progress-schedules by the Engineer-in-Charge shall not relieve the Contractor of any of his duties and responsibilities under the contract. The adoption of any modification in the schedule required by the Architect and Engineer-in-Charge shall not entitle the Contractor to any extra payment.

Also three sets of black & white/colour photographs every month showing the progress of work duly endorsed by the site Engineer should be submitted with the report. On completion of the work 5 sets of colour photographs or as directed by the Architects should be submitted.

19. If the Contractor after receipt of written notice from the Architect requiring compliance within ten days fails to comply with for further drawings/ instructions the Employer may employ and pay other persons to execute any such work that may be necessary to give effect thereto. All costs incurred in connection therewith shall be recoverable from the Contractor by the Employer on the certificate of the Architect as a debt or may be deducted by him from any moneys due to the Contractor.

20. **Default by Contractor :** If, the Contractor shall neglect or fails to proceed with the work with due diligence or if he violates any of the provisions of the Contract, the Architect and Engineer-in-Charge shall give the Contractor a notice, identifying deficiencies in performance and demanding corrective action. Such notice shall clearly state that it is given under the provision of this clause. After service of such notice, the Contractor shall not remove any plant, equipment and material from the site. The Employer shall have a lien on all such plant, equipment and material from the date of such notice till the said deficiencies have been corrected as mentioned in the said notice.

If the Contractor fails to take satisfactory corrective action within ten days after receipt of such notice, the Architect and Engineer-in-Charge on behalf of the Employer shall terminate the contract in whole. In case, the entire contract is terminated, the amount of security deposit, Earnest money deposit and Retention amount, if any, together with the value of the work done but not paid for, shall stand forfeited to the Client. The plants equipment and material held under this clause shall then be at the disposal of the Employer to recover the amount equivalent to the liquidated damages and registration of the Contractor shall be kept in abeyance for three years from the date as fixed in all such cases.

The Architect and Engineer-in-Charge if necessary shall direct that a part or the whole of such plant, equipment and material be removed from the site within a stipulated period, if the Contractor fails to do so, the Architect and Engineer-in-Charge shall cause them or any part of them to be sold holding the net proceeds of such sale to the credit of the Contractor. After settlement of accounts, the lien by the Employer on the Contractors remaining plant equipment and balance of material shall be released.

If the Contractor being an individual or a firm or a incorporate company, commits any "act of insolvency", or shall be adjudged as an insolvent or being an Incorporated Company shall have an order for compulsory winding up, made against it or passed as an effective resolution for winding up voluntarily or subject to the supervision of the court and the official Assignee or the Liquidator in such acts of insolvency or winding up, as the case may be, shall be unable within seven days after notice to him requiring him to do so, to show up giving a satisfactory reason to the Architect

that he is able to carry out and fulfil the contract and to give security there for, if so required by the Architect.

Or if the Contractor (whether an individual, firm or incorporate Company) shall suffer execution or other process of court attaching property to be issued against the Contractor.

Or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the Contractor.

Or shall assign or sublet this contract without the consent in writing of the Employer first had and obtained.

Or shall charge or encumber this contract or any payments due or which may become due to the Contractor hereunder.

Or if the Architect shall certify in writing to the Employer that the Contractor

i) Has abandoned the contract, or

ii) Has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for fourteen days after receiving from the Architect notice to proceed, or

iii) Has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or,

iv) Has failed to remove materials from the site or to pull down and replace work for seven days after receiving from the Architect written notice that the said materials or work were condemned and rejected by the Architect under these conditions, or

v) Has neglected or failed persistently to observe and perform all or any of the acts, matters or things by this contract to be observed and performed by the Contractor for seven days after written notice shall have been given to the Contractor requiring the Contractor to observe or perform the same.

Then and in any of the said cases the Employer may, notwithstanding any previous waiver, after giving seven days notice in writing to the Contractor, terminate the contract, but without thereby affecting the powers of the Architect or the obligations and liabilities of the Contractor, the whole of which shall continue in force as fully as if the Contract had not been so terminated, and as if the works subsequently executed had been executed by or on behalf of the Contractor, And further, the Employer by his agents or servants may enter upon and take possession of the works and all plants, tools, scaffolding, sheds, machinery, steam and other power utensils and materials laying on the premises or the adjoining lands or roads, and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the works or by employing any other Contractor or other person or persons to complete the works, and the Contractor shall not in any way interrupt or do any act, 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 works. When the works shall be completed or as soon thereafter as convenient the Architect shall give a notice in writing to the Contractor to remove his surplus materials and plant, and should the Contractor fail to do so within a period of fourteen days after receipt thereof by him the Employer may sell the same by [Public auction], and give

credit to the Contractor for the net amount realised. The Architect shall thereafter ascertain and certify in writing under his hand what (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 expenses or loss which the Employer shall have been put to in procuring the works to be completed, and the amount, if any, owing to the Contractor and the amount which shall be so certified shall thereupon be paid by the Employer to the Contractor or by the Contractor to the Employer, as the case may be, and the certificate of the Architect shall be final and conclusive between the parties.

If, at any time, after the acceptance of the tender, the Employer shall for any reasons whatsoever not require the whole or any part of the works to be carried out, the Architect shall give notice in writing to the Contractor who shall have no claim to any payment of compensation or otherwise whatsoever on account of any profit or advantage which he might have derived from the execution of the whole works.

The employer shall be at liberty to verify the status of construction and if the same is found to be unsatisfactory and report to that effect has been forwarded by the Architect and Engineer in Charge then the employer is at liberty to point it out to the contractor and suitable alteration be made in the construction as per the directions of the Architect and Engineer in Charge. If the contractor still fails to adhere to the instruction and quality then the employer shall be at liberty to terminate the contract.

The termination of contract in such manner shall render the contractor liable to pay for damages which are to be assessed by the Architect and Engineer in Charge. The assessment of damages shall be on the basis of the completed work, work to complete, quality of work, default in adhering to time schedule and other factors as deem fit by the Architect and Engineer in Charge.

21. The Contractor shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work due to modifications, delays in connected subcontracts, procurement of government controlled or other building materials, obtaining water and power connections or for any other reasons whatsoever. The Employer shall not be liable for any claim in respect thereof nor accept any liability for any sum provided for therein.

22. **Extra works:** The Contractor may, when authorised, and shall, when directed, in writing by the Architects with the approval of the Employer add to, omit from, or vary the works shown upon the drawings, or described in the specification, or included in the Schedule of Items/Quantities, but the Contractor shall make no addition, omission or variation without such authorisation or direction. A verbal authority or direction by the Architects shall, if confirmed by them 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 under provisions of its relevant clause or by the authority of the Architects with the concurrence of the Employer as herein mentioned. Any such extra as herein mentioned, is referred to as authorised extra and shall be made in accordance with the following provisions.

a) i. The net rates or prices in the original tender shall determine the valuation of the extra work where such extra work is of similar character and executed under similar conditions as the work priced therein.

ii. Rates for all items, wherever possible, should be derived out of the rates given in the priced Schedule of Items/Quantities, i.e. on pro-rata basis as far as possible.

b) Where the extra works are not of similar character and/or executed under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items of works are carried out or if the amount of any omissions or additions relative to the amount of the whole of the contract works or to any part thereof shall be such that in the opinion of the Architect the net rate of price contained in the Priced Schedule of Items/Quantities or tender or for any items of works involves loss or expense beyond that reasonably contemplated by the Contractor or is by reason of such omission or addition rendered unreasonably or inapplicable, the Architect shall fix such other rate or price as in the circumstances he shall think reasonable and proper, with the prior approval in writing of the Employer, on the basis of prevailing market rate of materials which includes all type of taxes & duties, labour and profit including overheads(including tools, plant and machinery) at **10%.**

c) Where extra work cannot be properly measured or valued the Contractor shall be allowed day work prices as per the net rates considered at the time of quoting the tender or, if not so considered, then in accordance with the local day work rates and wages for the district; provided that in either case vouchers specifying the daily time (and if required by the Architect, the workmen's names) and materials employed be delivered for verification to the Architect or his representative at or before the end of the week following that in which the work has been executed.

d) There cannot be any additional work to be undertaken without prior approval of the client. Only those works shall be paid where prior approval of client shall be obtained.

The measurement and valuation in respect of the Contract shall be completed within the "Period of final measurements" stated in the Appendix or if not stated then within six months of the completion of the Contract works as defined in relevant clause.

23. The Contractor shall submit in advance a statement of extra items with necessary authentic supporting documents / vouchers for Architect's approval. Only on approval he is bound to carry out any extra items of work, necessary for the completion of the job even though the items may not be included in the Schedule of items/quantities. Schedule of instructions in respect of such additional items and their approximate quantities shall be issued in writing by the Architects.

24. **Sub-contracts:** For the provisional items/sums indicated in the tender, if the work is awarded directly/separately to a specialised agency. All Specialists, Merchants, Tradesmen and others employed thus to execute any work of provisional items/sums included in the Schedule of Items/Quantities and/or Specifications who may be nominated or selected by the Architect are hereby declared to be Sub-Contractors employed by the Contractor and are herein referred to as nominated Sub-Contractors.

No nominated Sub-Contractors shall be employed in connection with the works against which the Contractor shall have reasonable objection or (save where the Architect and Contractor shall otherwise agree) who shall not enter into a Contract providing:

a) That the nominated Sub-Contractor shall indemnify the Contractor against the same obligations in respect of the Sub- Contract as the Contractor is under in respect of this contract.

b) That the nominated Sub-Contractor shall indemnify the Contractor against claims in respect of any negligence by the Sub-Contractor, his servants or agents or any misuse by him or them of any scaffolding or other plant, the property of the Contractor or under any workmen's compensation Act in force.

c) Payment shall be made to the nominated Sub-Contractor within fourteen days of his receipt of the Architect's certificate. Also, before any such certificate is issued the Contractor shall upon request furnish proof to the Architect that all nominated Sub-Contractors accounts included in previous certificates have been duly discharged; in default whereof the Employer may pay the same upon a certificate of the Architect and deduct the amount thereof from any sums due to the Contractor. The exercise of this power shall not create privity of contract as between Employer and Subcontractor.

The general main Civil Contractor shall be responsible for close co-ordination, follow-up and general assistance in timely completion of work with all other agencies like landscaping agency, HVAC works, Furniture works, etc. and its connected work to be completed by the General Contractor. Main civil contractor shall not be paid any charge for co-ordinated work of other agencies as co-ordination charges. The Contractor shall not directly or indirectly transfer, assign or under let the contract or any part share thereof or any interest therein without the prior written consent of the Employer; and no undertaking shall relieve the Contractor from the full and entire responsibility of the contract or from active superintendence of the works during their progress.

25. The Contractor must co-operate with other Contractors appointed by the Employer so that the work shall proceed smoothly with the least possible delay and to the satisfaction of the Architects.

26. **Materials, its sample approval, its procurement and storage:** The Contractor should make his own arrangement to obtain all materials required for the work, except otherwise stated. All materials shall, so far as procurable, be of the respective kinds described in the Schedule of Items/Quantities and/or specifications and in accordance with the Architect's instructions, and the Contractor shall upon the request of the Architect furnish him with all invoices, accounts, receipts and other vouchers to prove that the materials comply therewith. The Contractor shall at his own cost arrange for and/or carry out any test of any materials which the Architects may require.

The Contractor shall submit, samples of all the finishing materials, to the Architects/ Consultants, for approval, as directed by the Architects/Consultants much in advance, so as to avoid any complications regarding availability. Also, whenever samples are to be prepared for approval the same shall be prepared immediately on receipt of the drawings and got approved by the Architect.

Approval of the samples of various materials given by the Engineer-in-charge and Architects shall not absolve the Contractor from the responsibility of replacing defective material brought on site or materials used in the work found defective at a later date. The Contractor shall have no claim to any payment or compensation whatsoever on account of any such materials being rejected by the Engineer-in-charge and Architects. No collection of material shall be made before it is approved by the Engineer-in-charge and Architects.

The Architect shall, during the progress of the works, have to order in writing from time to time the removal from the works, within a period specified in the order, of any materials which in his opinion are not in accordance with the specifications or his instructions, the substitution of proper

materials, and the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the drawings, specifications or instructions; and the Contractor shall forthwith carry out such order at his own cost. In case of default on the part of the Contractor to carry out such 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 thereto, as certified by the Architect shall be borne by the Contractor, or may be deducted by the Employer from any moneys due, or that may become due, to the Contractor.

27. **Advance material payment:** N.A.

28. **Authorised permissions:** The Contractor shall approach, directly to the Municipal and other authorities for obtaining the type of permission required by law.

All fees for the supply of good quality water, including obtaining municipal connection and drainage connection for his labour shall be borne by the Contractor and fees if any payable for permanent connections shall be initially paid by the Contractor and the Employer shall reimburse the amount on production of the receipts.

29. **Electricity: As per item no 22.1 of appendix**.

The Contractor shall be responsible for providing and maintaining the whole of the installation on the load side of supply, as well as all safety aspects covered under I.E. act/I.E. rules, National Electric Code etc. All necessary/safety precaution must be taken and the Contractor's electrical installation shall be subject to the approval by the Owner/Engineer in-charge and must comply with the requirement of the appropriate statutory authorities. Contractor shall not use welding sets for cutting works. Three phase welding machine is preferred.

Contractor shall not increase the electrical load unless it is approved by Engineer-in-charge. Contractor is responsible for safety of his personnel, and the third party, working in the area of Contractor's work site.

Owner shall have right to disconnect, the power supply for any irregularities observed in the above conditions, and no claim of the Contractor for cost overrun shall be entertained, for loss of time due to the same.

Contractor shall provide licensed Electrical Supervisor/ Electrician for operation and maintenance of his electrical installation.

30 Water supply: As per item no 22.2 of appendix

The Contractor shall not have any claim whatsoever on account of failure of water supply at any time.

The Contractor's rates and prices shall be deemed to be inclusive of all such charges and costs.

The Contractor shall arrange for sufficient storage of water to ensure continuity of work. If municipal water is not available and should it be necessary to bore a well or to bring water from outside by tankers, the Employer shall not be liable to pay any charges in connection therewith.

If water supply from statutory authorities is available, then all charges towards temporary connection shall be paid by the contractor and same shall not be reimbursed. All charges towards permanent connection shall be initially paid by the contractor and the Employer shall reimburse the amount on production of the receipts. The Contractor has to make payment for the

consumption of electric power consumed towards operation of bore well as per actual consumption of electrical power. The contractor shall be solely responsible for the operation and maintenance of the bore well during the contractual period. At the end of the contract, contractor shall hand over the bore well in fully functional condition to the client, as it was given originally for operation. This includes change or repair of submersible pump, if it is required.

31. **Adhere to the Safety code:** The Contractor shall strictly comply with the provisions of safety code annexed hereto as well as all laws pertaining to labour etc.

32. **Insurance:** The Contractor has to take full insurance for Workmen's compensation, Third party and Contractor's all risks indemnifying the Employers, Architects and Consultants against all losses and damages arising out of any mishap on site, or any claims whatsoever. Necessary warning signs shall have to be put up by the Contractor.

33. **Rolling margin for steel:** For rolling margin of steel bars, no allowances shall be given to the Contractor and the steel bars shall be measured as per standard weight.

34. **Testing:** Necessary cube tests, mix design and steel tests shall be done by the Contractors at their own expense and the report thereof showing different strength, compressive and tensile respectively, shall be submitted to Employer, Architect & Consultants. No extra charges shall be paid for the same.

    While submitting the material for mix design, the exposure condition of concrete shall be specified in two parts-below plinths and above plinth. Design mix should specify minimum cement content and if required shall also specify a specific plasticizer for vertical elements.

    Contractor has to arrange for cube testing machine at site for regular cube tests as per the requirements of consultant and I.S. specifications. A Register in the prescribed Performa showing test result of materials and work tests shall be maintained at the site of work by the Contractor and every entry thereof shall invariably be signed by the Contractor or his authorised representative in token of its correctness.

35. **Project-in-charge:** The Contractor shall employ full-time technically qualified staff during the execution of the work.

    The staff employed for the work must have sufficient experience to handle the work independently. They shall have to stay at the site of work and shall not be entrusted with any other duty except of this work.

    The Contractor shall inform the Employers/ Architects/ Consultants about the name of the such qualified Project - in - charge for necessary co-ordination, discussions, site meetings, and smooth execution of the job.

36. **Measurements:** All works shall be measured net by standard measure and according to the rules and customs of the Mode of Measurement, IS: 1200, without reference to any local custom.

    The Architect from time to time shall intimate the Contractor and the Employer that he requires the works to be measured. The Contractor shall forthwith attend to or send qualified personnel to assist, in all respects, the Architect's personnel and Employer's Site Engineer, in taking such measurements and calculations.

In "Mode of Measurement" in the specifications wherever a dispute arises in the absence of specific mention of particular point or aspect, the provisions on these particular points or aspects in the relevant Indian Standards shall be referred to.

All measurements and computations, unless otherwise specified, shall be carried out nearest to the following limits;

1) Length, width and depth (height/thickness)----------0.01 m.

2) Areas----------0.01 m^2

3) Cubic Contents----------0.01 m^3

In recording dimensions of work, the sequence of length, width and height (depth) or thickness shall be followed.

37. **Billing for the entire work shall be in the Computerised form on a computer diskette and a conventional hard copy. The format for the same shall be given by the Architects. 70% adhoc payment shall be made on the amount certified by the Site In charge within fifteen days from the date of submission of bill.**

A bill, on a computer diskette along with a hard copy, signed by the Engineer-in-charge/Site Engineer, on each page, shall be submitted by the Contractor each month on or before the date fixed by the Architect and Engineer-in-Charge for all works executed in the previous month and the Architect and Engineer-in-Charge shall take requisite measurement for the purpose of having the same verified and the claim, so far as it is admissible, shall be adjusted, if possible, within ten days from presentation of the bill.

The value of the monthly bill shall be minimum 10% of the contract value. A maximum of 8 running bills shall be allowed during the entire project execution.

The Contractor shall, on submitting a monthly bill therefore, is entitled to receive payment proportionate to the part of the work then approved and passed by the Architect and Engineer-in-charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the Contractor. All such intermediate payments shall be regarded as payments by way of advance against the final payments only and not as payments for work actually done and completed and shall not preclude the Architect and Engineer-in-Charge from required bad, unsound, imperfect or unskilled work to be removed and taken away and reconstructed, or re-erected, nor shall any such payment be considered as an admission of the due performance of the contract or any part thereof in any respect or the accruing of any claims, nor shall it conclude, determine, or affect in any way the power of the Architect and Engineer-in-Charge as to the final settlement and adjustment of the accounts or otherwise or in any other way very or effect the contract.

The rates for items of works shall be valid only when the item concerned is accepted as having been completed fully accordance with the sanctioned specifications. In cases where the items of work are accepted as not so completed, the Architect and Engineer-in-Charge may make payment on account of such items at such reduced rates as he may consider reasonable in preparation of final or `on account bill'. The charges to be made in the bills shall always be entered at the rates specified in the agreement or at the part/reduced rates subject to the approval by the Architect and Engineer-in-Charge in case of items not completed/ executed as per agreements or in the case

of any extra work ordered in pursuance of these conditions and not mentioned or provided for in the tender, at the rate hereinafter provided for such work. The copy of the corrected and certified bill, on the floppy diskette and in hard copy wherever changes/errors are indicated shall be returned to the Contractor, for his own scrutiny and record. The changes/errors indicated, shall be highlighted in the hard copy, for easy pinpoint of the same.

The Contractor shall be paid by the Employer from time to time by instalments under Interim certificates issued by the Architect to the Contractor on account of the works executed in accordance with this contract. The certificates, in the opinion of the Architect, works to an approximate value named in the Appendix as "Value of work for Interim certificates" (or less at the reasonable discretion of the Architect) has been executed, subject however, to a retention of the percentage of such value named in the Appendix hereto as "Retention percentage for Interim certificates" until the total amount retained shall reach the sum named in the Appendix as "Total Retention Money" after which the Instalments shall be up to the full value of the work subsequently so executed and fixed in the building. The Architect may in his discretion include in the Interim certificate such an amount as he may consider proper on account of materials delivered upon the site by the Contractor for use in the works. Once the works have been virtually completed and the Architect have certified in writing that they have been completed, the Contractor shall be paid by the Employer in accordance with the certificate issued by the Architect specifying the sum of money named in the Appendix as "Instalment after Virtual Completion" being a part of the said Total Retention Money. The Contractor shall be entitled to the payment of the Final Balance in accordance with the Final Certificate issued in writing by the Architect at expiration of the period referred to as "the Defects Liability Period" in the Appendix hereto from the date of virtual completion or soon after the expiration of such period as the works shall have been finally completed and all defects made good according to the true intent and meaning hereof whichever shall last happen. The issue of such a certificate by the Architect during the progress of the works or at or after their completion shall not relieve the Contractor from his liability under relevant clauses nor relieve the Contractor of his inability in cases of fraud, dishonesty, or fraudulent concealment relating to the works or materials or to any matter dealt with in the certificate, and in case of all defects and insufficiencies in the works or materials which a reasonable examination would not have disclosed. No certificate of the Architect shall of itself be conclusive evidence that any works or materials to which it relates are in accordance with the contract neither shall the Contractor have a claim for any amounts which the Architect might have certified in any interim bill and paid by the Employer and which might subsequently be discovered as not payable and in this respect the Employer's decision shall be final and binding.

The Architect / Employer shall have power to withhold any certificate if the works or any parts thereof are not being carried out to his satisfaction.

The Architect / Employer may in any certificate make any correction, may it be a certificate, previously certified and issued by him.

No certificate of payment shall be issued by the Architect / Employer if the Contractor fails to insure the works and keep them insured till the issue of the Virtual Completion Certificate.

Payments upon the Architect's certificate shall be made within the periods named in the Appendix as "Period for honour of certificates" after such certificates has been delivered to the Employer.

If payment of the amount payable by the Employer certified by the Architect shall be in arrears and unpaid for thirty days even after a notice in writing requiring payment, have been given by the Contractor to the Employer, or if the Employer interferes with or obstructs the issue of any such certificate, or if the Employer shall repudiate the contract, or if the works be stopped for three months under the order of the Architect or the Employer or by any injunction or other order of any court of law, then in any of the said cases the Contractor shall be at liberty to determine the contract by notice in writing to the Employer, through the Architect, and he shall be entitled to recover loss he may sustain upon any plant or materials supplied or purchased or prepared for the purpose of the contract.

In arriving at the amount of such payment the net rates contained in the Contractor's original tender shall be followed, or where the same may not apply, valuation shall be made in accordance with relevant clause.

The final bill shall be submitted by the Contractor within forty five days of the completion of the work, otherwise the Architect and Engineer-in-Charge's certificate of the measurements and of the total amount payable for the work shall be final and binding on all parties.

The Employer shall have a right to cause a technical examination of the works and the final bill of the Contractor including all supporting vouchers, abstracts, etc. to be made at the time of payment of the final bill. If as a result this examination or otherwise any sum is found to have been overpaid or over certified it shall be lawful for the Employer to recover the sum.

As built drawings: Contractor has to prepare the as built drawings, for all the works under the scope of execution, incorporating all the changes / amendments executed at site till handing over of the project to client. The as built drawings shall have to be prepared in required Auto cad format and Four sets of hard copy along with a soft copy is to be submitted to the Architect . For preparing as built drawings, Architect shall furnish the required drawing in soft copy.

38. **Escalation and mobilisation:** No escalation on any material and/or labour shall be given on any grounds shall be considered even if the extension of time limit on any reasonable grounds is permitted. Under no circumstance shall any Contractor be entitled to claim enhanced rate for any items in this contract.

Mobilization advance: As per item no 15 of appendix

The recovery of the advance: As per item no 16 of appendix.

A bank guarantee from a Nationalised Bank shall have to be produced for the amount of advance applied for. The responsibility of the Contractor for the refund of the advance is absolute and not dependent on the completion of the work. The Contractor shall have to refund the advance with accrued interest, irrespective of the fact whether the contract is breached by either party or abandoned or finalised prematurely.

39. **Work to be covered up:** As soon as the work is completed, the Contractor shall give a notice of such completion to the Architect / Employer and on receipt of such notice, the Architect / Employer shall inspect the work and if he is satisfied that the work is completed in all respects then:

(i) For all works costing up to Rs. 50 lakhs (amount put to tender), the final measurements shall be recorded within 15 days from the date of physical completion of the work and the final bill

shall be prepared, by the Contractor, within 15 days, from the date of recording the final measurements. The completion certificate shall be issued within one month, from the date of recording final measurements. The completion certificate shall be issued within one month from the date of final measurements subject to the Contractor fulfilling his obligation as provided in the contract and subject to the work being complete in all respects.

(ii) In respect of works costing more than Rs. 50 lakhs (amount put to tender), the final measurements shall be recorded within 30 days, from the date of physical completion of the work and the final bill shall be prepared, by the Contractor, within 30 days from the date of recording final measurements. The completion certificate shall be issued within two months, from the date of final measurements subject to the Contractor fulfilling his obligations as provided in the contract and subject to the work being complete in all respects.

When separate periods of completion have been specified for items or groups of items, the Architect and Engineer-in-Charge shall issue separate completion certificate for such items or groups of item.

“Neither certificate of completion shall be issued nor works shall be considered as a complete” till the Contractor has removed from the premises, on which the work has been executed, all scaffolding, sheds and surplus materials, except such, as are required for rectification of defects; rubbish and all huts and sanitary arrangements required for his workmen on the site in connection with the execution of the work, as shall have been erected by the Contractor for the workmen and cleared all dirt from all parts of building(s) in, upon or about which the work has been executed or of which he may have had possession for the purpose of the execution thereof and cleared floors, gutters and drains, cased doors and sashes, oiled locks and fastenings labelled keys clearly and handed them over to the Architect and Engineer-in-Charge or their representative and made the whole premises fit for immediate occupation or use to the satisfaction of the Architect and Engineer-in-Charge. If the Contractor shall fail to comply with any of the requirements of these conditions as aforesaid, on or before the date of completion of the works, the Architect and Engineer-in-Charge may, at the expense of the Contractor, fulfil such requirements and dispose of the scaffolding, or surplus materials and rubbish etc. as he thinks fit and the Contractor shall have no claim in respect of any such scaffolding or surplus materials except for any sum actually realised by the sale thereof less the cost of fulfilling such requirements is more than the amount released on such disposal as aforesaid, the Contractor shall forthwith, on demand pay such excess. The Architect and Engineer-in-Charge shall also have the rights to adjust the amount of excess against any amounts that may be payable to the Contractor.

The works shall not be considered as completed until the Architect has certified in writing that they have been virtually completed. The Defects Liability Period shall commence from the date of such Certificate.

40. **Defects Liability :** Any defect, shrinkage, settlement or other faults which may appear within the "Defects Liability Period" **stated in the Appendix here-to** or, if non stated, then within **twelve months** after the virtual completion of the works, arising in the opinion of the Architect from materials or workmanship not in accordance with the contract, shall upon the directions in writing of the Architect, and within reasonable time as shall be specified therein, amended and made good by the Contractor, at his own cost and in case of default the Employer may employ and pay other persons to amend and made good such defects, shrinkage, settlements or other faults, and

all damages, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the Contractor and such damage, loss and expenses shall be recoverable from him by the Employer or may be deducted by the Employer, upon the Architect's certificate in writing from any money due or that may become due to the Contractor, or the Employer may in lieu of such amending and making good by the Contractor, deduct from any moneys due to the Contractor, a sum, to be determined by the Architect equivalent to the cost of amending such work and in the event of the amount retained under relevant clause being insufficient, recover the balance from the Contractor, together with any expenses the Employer may have incurred in connection therewith. Should any defective work have been done or material supplied by any Sub- Contractor employed on the works who has been nominated or approved by the Architect as provided in relevant Clause, the Contractor shall be liable to make good in the same manner as if such work or material had been done or supplied by the Contractor and been subject to the provisions of this Clause and relevant clause. The Contractor shall remain liable under the provisions of this Clause notwithstanding the signing of any certificate or the passing of any accounts, by the Architect.

41. **Damages :** The Contractor shall provide all necessary fencing and lights required to protect the public form accident and shall also be bound to bear expenses of defence of every suit, action or other legal proceeding at law that may be brought by any person for all injury to persons, animals or things & for all structural and decorative damage to property arising out of negligence/ carelessness, accident or any other cause by the Contractor or any of the nominated Sub-Contractor or any employee of either. Any damages and costs which may be awarded in any such suit, action or proceedings to any such person, or which may, with the consent of the Contractor, be paid, on any claim put up by any such persons, shall be borne by the Contractor.

This clause shall also include for any damage to buildings, whether immediately adjacent or otherwise, any damage to roads, streets, footpaths, bridges or ways as well as all damage caused to the buildings and works forming the subject of this contract by frost, rain, wind or any other adverse weather conditions.

The Contractor shall indemnify the Employer/ Architect/ Consultants and not hold against for any expenses arising from injury or damage to persons or property as aforesaid, for any claim made in respect of injury or damage under any Acts of any legislature or otherwise and also in case of any award of compensation or damages consequent upon such claim.

The Contractor shall reinstate all damages of every sort mentioned in this clause, so as to deliver up the whole of the contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of 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 connection to the works or in consequences thereof and shall at his own expense arrange to effect and maintain until the virtual completion of the contract, with an approved office a policy of insurance in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the Architect from time to time during the currency of this contract.

The Contractor shall be responsible for any liability which may be excluded from the insurance policies above referred to and also for all other damages to any person, animal or property arising out of the incidental to the negligent or defective carrying out of this contract. He shall also

indemnify the Employer in respect of any costs, charges or expenses arising out of any claim or proceedings and also in respect of any award of compensation or damages, arising there from.

The Employer shall with the concurrence of the Architect be entitled to deduct the amount of any damage, compensation, costs, charges and expenses arising or accruing from, or in respect of, any such claims or damage from any or all sums due or to become due to the Contractor, without prejudice to the Employer's other rights in respect thereof.

Compensation for all damage done intentionally or unintentionally by Contractor's labours whether in or beyond limits of the Employer's property including any damage caused by the spreading of fire mentioned in the relevant clause, shall be estimated by the Architect and Engineer-in-Charge, and the estimates of the Architect and Engineer-in-Charge shall be final and the Contractor shall be bound to pay the amount of the assessed compensation of demand, failing which the same shall be recovered from the Contractor, as damages, deducted by the Architect and Engineer-in-Charge from any sums that may be due or become due to the Employer, of the Contractor under this contract or otherwise.

The Contractor shall bear the expenses of defending any action or other legal proceedings that may be brought by any person for injury sustained by him owing to neglect of precautions to prevent the spread of the fire and he shall also pay the damages and cost that they may be awarded by the court in consequence.

The Contractor shall be responsible for and shall pay the expenses of providing medical aid to any workmen who may suffer a bodily injury as a result of an accident. If such expenses are incurred by Government, the same shall be recoverable from the Contractor forthwith and be deducted, without prejudice to any other remedy of Government, from any amount due or that may become due to the Contractor.

The Contractor shall provide all necessary personal safety equipment and first-aid apparatus available for the use of the persons employed on the site and shall maintain the same in suitable condition for immediate use at any time and shall comply with the following regulations in connection therewith.

(a) The workers shall be required to use the equipment so provided by the Contractor and the Contractor shall take adequate steps to ensure proper use of the equipment by those concerned.

(b) When works is carried out in proximity to any place where there is a risk of drowning, all necessary steps shall be taken for the prompt rescue of any person in danger.

(c) Adequate provision shall be made for prompt first-aid treatment of all injuries likely to be sustained during the course of the work.

42. **Workmen's Compensation Act:** If, for any reason, the Employer is obliged, by virtue of the provisions of the workmen's compensation Act, 1923 or any statutory modification or re-enactment thereof to pay compensation to a workmen employed by the Contractor in execution of the works, the Employer shall be entitled recover from the Contractor the amount of compensation so paid, and without prejudice to the rights of the Employer under the said Act. The Employer shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by the Employer to the Contractor under this contract or

otherwise. The Employer shall not be bound to contest any claim made against it under the said Act, except on the written request of the Contractor and upon his giving to the Employer full security to the satisfaction of the Employer for all costs for which the Employer might become liable in consequence of contesting such claim.

The Contractor shall also similarly indemnify the Employer against all claims which may be made upon the Employer whether under the workmen's compensation Act or any other statue in force during the currency of this contract or at common law in respect of any employee of the Contractor or any Sub-Contractor and shall at his own expense effect and maintain, until the virtual completion of the contract, with an approved office a policy of insurance in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the Architect from time to time during the currency of the contract.

43. **Arbitration :** The decisions, opinion, direction, certificate (except for payment) with respect to all or any of the matters under relevant clause (which are herein referred to as the excepted matters) shall be final and conclusive and binding on the parties hereto and shall be without appeal. Any other decision, opinion, direction, certificate or valuation of the Architect or any refusal of the Architect to give any of the same, shall be subject to the right of arbitration and review under clause 34 hereof in the same way in all respects (including the provision as to opening the reference) as if it were a decision of the Architect.

The dispute on termination of contract owing to quality differences (as per clause 24) shall be resolved by the Architect and the determination of damages and payment shall be done by the Architect. The decision of the Architect shall be final and binding on the parties.

In case of any other dispute or differences arising out of the tender, work order and contract shall be referred to arbitration in accordance with the arbitration clause in the tender document.

Such written notice shall specify the matters which are in dispute or difference of which such written notice has been given and no other shall be and is hereby referred to the arbitration and final decision of an arbitrator to be agreed upon and appointed by both the parties or, in case of disagreements as to the appointment of a single arbitrator, to the appointment of two arbitrators, one to be appointed by each party, which arbitrators shall, before taking upon themselves the burden or reference, appoint an Umpire. The venue for such arbitration shall be at **Gandhinagar.**

The Arbitrator , shall have power to open up, review and revise any certificate, opinion decision requisition or notice, save in regard to the excepted matters in dispute which shall be submitted to arbitration and of which notice shall have been given as aforesaid.

The Arbitrator or Arbitrators, as the case may be, shall make his or their award within Three Months (or such further extended time as may be decided by him or them as the case may be with the consent of the parties) from the date of entering on the reference. In case, during the arbitration proceedings, the parties mutually settle, compromise or compound their dispute or difference, the reference to arbitration and the appointment of the Arbitrator , shall be deemed to have been revoked and the arbitration proceedings shall stand withdrawn or terminated, with effect from the date on which the parties file a joint memorandum of settlement thereof, with the Arbitrator or the Arbitrators, as the case may be.

Upon every or any such reference, the cost of, incidental to the reference and award respectively, shall be in the discretion of the Arbitrator or Arbitrators, as the case may be who may determine

the amount thereof, or direct the same to be taxed as between attorney and Employer or as between party and party and shall direct by whom and to whom and in what matter the same shall be borne and paid. This submission shall be deemed to be a submission to arbitration within the meaning of the Indian Arbitration Act, 1996 or any statutory modification thereof. The Award of the Arbitrator or Arbitrators, as the case may be, shall be final and binding on the parties. It is agreed that the Contractor shall not delay the carrying out of the works by reason of any such matter, question or dispute being referred to arbitration, but shall proceed with the works with all diligence and shall, until the decision of the Arbitrator or Arbitrators, as the case may be, is given, abide by the decision of the Architect and no award of the Arbitrator or Arbitrators, as the case may be, shall relieve the Contractor of his obligation to adhere strictly to the Architect's instructions with regard to the actual carrying out of the works. The Employer and the Contractor hereby also agree that arbitration under this clause shall be a condition precedent to any right of action under the contract.

44. The Contractor shall on the request of the Architect/Client immediately dismiss from the works any person employed thereon by him who may, in the opinion of the Architect, be incompetent or misconduct himself and such persons shall not be again employed on the works without the permission of the Architect.

45. **Site open for inspection:** The Employer, Architect and their respective representatives shall at all reasonable times have free access to the work and/or to the workshops, factories or other places where materials are lying or from which they are being obtained and the Contractor shall give every facility to the Employer, Architect and their representatives necessary for inspections and examination and test of the materials and workmanship. No person not authorised by the Employer or Architect except the representatives of public authorities shall be allowed on the works at any time.

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

46. The term **"Site Engineer/C.O.W."** shall mean the person appointed and paid by the Employer and acting under the orders of the Architect to inspect the works in the absence of the Architect. The Contractor shall afford the Site Engineer/ C.O.W. every facility and assistance for inspecting, checking and measuring the works and materials. Neither the Site Engineer/C.O.W. nor any representative of the Architect shall have power to set out works or to revoke, alter, enlarge or relax any requirements of the contract, or to sanction any day work, additions, alterations, deviations or omissions, or any extra work whatever except that such authority may be specially conferred by the order of the Architect with the prior concurrence in writing of the Employer.

The Site Engineer/C.O.W. or any representative of the Architect, or the Employers shall have power to give notice to the Contractor or to his representative of non approval of any work or materials and such work shall be suspended or the use of such materials shall be discontinued

until the decision of the Architect is obtained. The work shall from time to time be examined by the Architect, the Site Engineers/C.O.W. or the Architect's representative but such examination shall not in any way exonerate the Contractor from the obligation to remedy any defects which may be found to exist at any stage of the works or after the same is completed. Subject to the limitation of this clause the Contractor shall take instructions only from the Architect.

47. The Contractor shall submit three sets of as built plumbing drawings after the completion of the work.

48. **Treasure trove :** In the event of the discovery by the Contractor or his employees during the progress of the work, of any treasure trove, fossils, minerals or other articles or things of interest, the Contractor shall immediately give notice thereof, to the Architect and Engineer-in-Charge and forthwith hand over the same to them. Such treasure or other things shall be the property of the Department.

49. **Material to be supplied by the Employer :** If the specification of the work provides for the use of any special description of materials to be supplied by the Employer or if it is required that the Contractor shall use certain stores to be provided by the Employer (such materials and stores and the prices to be charged therefore as hereinafter mentioned being so far as practicable for the convenience of the Contractor but not so as in any way to control the meaning or effect of this contract specified in the schedule or memorandum hereto annexed) the Contractor shall be supplied with materials and stores as may be required from time to time to be used by him for the purpose of the contract only, and the value of the full quantity of materials and stores so supplied shall be deducted from any sum then due, or thereafter to become due to the Contractor under the contract, or otherwise, from the security deposit, or the proceeds of sale thereof; if the deposit is held in National Bank, the same or a sufficient portion thereof, shall, in that case, be sold for the purpose. All materials supplied to the Contractor shall remain the absolute property of the Employer and shall, on no account, be removed from the site of the work, and shall at all time, be open to inspection by the Architect and Engineer-in-Charge. Any such materials, unused and in perfectly good condition at the time of completion or termination of the contract, shall be returned to the Employer, if the Architect and Engineer-in-Charge so requires by a notice in writing given under his hand, but the Contractor shall not be entitled to return any such materials except with the consent in writing of the Architect and Engineer-in-Charge and he shall have no claim for compensation on account of any such material supplied to him as aforesaid but remaining unused by him or for any wastage in or damage thereto.

The Contractors shall co-operate with the Employer/his representative for stacking/storing the materials in a proper manner with necessary protection as instructed. The same shall be provided by the Contractor.

All stores and materials such as cement, if the total consumption of which exceeds [25 tons]; and steel etc. shall be kept by the Contractor in separate godown provided with a double lock. The key of one of the lock shall remain with the Engineer-in-Charge or his representative and the stores shall be accessible to the Architect and Engineer-in-Charge or his representative at all times. No materials shall be allowed to be removed from the site of the work, and any material required for the execution of the work shall be taken out from the godown only in the presence of a daily authorised representative of the Architect and Engineer-in-Charge.

The Contractor shall inspect the material supplied to him at the time `of taking the delivery thereof and satisfy himself of the quantity, quality, and condition thereof prior to taking delivery and the Owner shall not be liable for any claims or complaints whatsoever in respect of quality, quantity or conditions of said materials once the Contractor has taken delivery thereof.

The Contractors shall immediately inform and ensure the Employer for variation in weight of the materials, if any, with respect to the standards and necessary records with Employer/representatives shall be made, if supplied by the Employer. The Contractor shall make his own arrangement for weighment of the materials before taking delivery and joint records shall be maintained with the Employer. Adequate size of godown for storage shall be constructed and maintained and under no circumstances the Contractor shall refuse on any grounds for accepting the delivery.

Notwithstanding anything contrary to the contents of any/all of the clauses of this contract, when, any material for the execution of the contract, is procured with the assistance of the Employer by purchases made under orders or permits or licenses issued by Government, the Contractor shall hold the said materials economically and solely for the purpose of the contract and not dispose of them without the prior written permission of the Employer and return it to the Employer, if required by the Employer at the price to be determined by the Architect having due regard to the condition of the materials, the price to be determined shall not exceed the purchase price thereof inclusive of sales tax, octroi and other such levies paid by the Contractor in respect thereof. In the event of breach of the aforesaid condition, the Contractor shall, in addition to being liable to action for contravention of the terms of licenses or permit and/or criminal breach of trust, be liable to Employer for all moneys, advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach.

50. **Priority List:** The priority list for approval of the materials for all the items of works shall be as follows :

a. As approved by the Architect.

b. ISI marked.

c. Conforming to IS.

d. As per the make specified in the relevant item of work.

e. Equivalent to the make specified.

SAFETY CODE

1. Suitable scaffolds, of sound material, having adequate strength and in proper condition, shall be provided for workmen for all works that cannot be safely done from the ground or from solid construction except such short period work as can be done safely from ladders. When a ladder is used an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable footholds and handhold shall be provided on the Ladder and the ladder shall be given an inclination not steeper than ¼ to 1 (¼ horizontal and 1 vertical). Scaffolds shall not be overloaded and so far as practicable the load shall be evenly distributed. Before installing the lifting gear on scaffolds, special precaution shall be taken to ensure strength and stability of the scaffolds. Scaffolds shall be periodically inspected by competent person. Before allowing a scaffold to be used by his workman, the Contractor shall, whether the scaffold has been erected by his workmen or not, take steps to ensure that is complies fully with the regulations herein specified.

2. Scaffolding or staging more than 3.25 meters above the ground or solid construction, swung or suspended from an overhead support or erected with stationary support, shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 meter high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.

3. Working platform, gangways, and stairways shall be so constructed that they do not sag unduly or unequally, and if height of a platform or gangway or stairways is more than 3.25 meters above ground level or solid construction, it shall be closely boarded, have adequate width and be suitably fenced, as described in 2 above.

4. Every opening in floor of a building or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of 1 meter.

5. Safe means of access shall be provided to all working platform and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 meters in length. Width between side rails in a rung ladder shall in no case be less than 30 cm. for ladders upto and including 3 meters in length. For longer ladders this width shall be increased at least 6 mm. for each additional 30 cm. of length. Uniform step spacing shall not exceed 30 cm.

   Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites shall so stacked or placed as to cause danger or inconvenience to any person or the public. The Contractor shall provide all necessary fencing and lights to protect public from accidents and shall be bound to bear expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and costs which may be awarded in any such suit, action or proceedings to any such person or which may with the consent of the Contractor be paid to compromise any claim by any such person.

6. **Excavation and Trenching:** All trenches, 1.5 meters or more in depth, shall at all times be supplied with at least one ladder for each 30 meters in length or fraction thereof. Ladder shall be extended

from bottom of trench to at least 1 meter above surface of the ground. Sides of a trench which is 1.5 meters or more in depth shall be stepped back to give suitable slope, or securely held by timber bracing so as to avoid the danger of sides collapsing. Excavated material shall not be placed within 1.5 meters of edge of trench or half of depth of trench, whichever is more. Cutting shall be done from top to bottom. Under no circumstances shall undermining undercutting be done.

7. **Demolition:** Before any demolition work is commenced and also during the process of the work

a) All roads and open areas adjacent to the work site shall either be closed or suitably protected.

b) No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by operator shall remain electrically charged;

c) All practical steps shall be taken to prevent danger to persons employed, from risk or fire or explosion or flooding. No floor, roof, or other part of a building shall be so overloaded with debris or materials as to render it unsafe.

8. All necessary personal safety equipment as considered adequate by the Engineer – in - Charge shall be available for use of persons employed on the site and maintained in a condition suitable for immediate use; and the Contractor shall take adequate steps to ensure proper use of equipment by those concerned.

a) Workers employed on mixing asphaltic materials, cement and lime mortars/concrete shall be provided with protective footwear and protective goggles.

b) Those engaged in handling any material which is injurious to eyes shall be provided with protective goggles.

c) Those engaged in welding works shall be provided with welder's protective shields.

d) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

e) When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that manhole covers are opened and manholes are ventilated at least for an hour before workers are allowed to get into them. Manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to public.

f) The Contractor shall not employ men below the age of 18 and women on the work of painting with products containing lead in any form. Whenever men above the age of 18 are employed on the work of lead painting, the following precautions shall be taken:

i) No paint containing lead or lead products shall be used except in the form of paste or ready.

ii) Suitable face masks shall be supplied for use by workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scraped.

iii) Overalls shall be supplied by the Contractor to workmen and adequate facilities shall be provided to enable working painters to wash during and on cessation of work.

9. When work is done near any place where there is risk of drowning, all necessary equipment shall be provided and kept ready for use and all necessary steps taken for prompt rescue of any person

in danger and adequate provision made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

10. Use of hoisting machines and tackle including their attachments, anchorage and supports shall confirm to the following:

    a) i. These shall be of good mechanical construction, sound material and adequate strength and free from patent defects and shall be kept in good repair and in good working order.

    ii. Every rope used in hoisting or lowering materials or as a means suspension shall be of durable quality and adequate strength, and free from patent defects.

    b) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years shall be in charge of any hoisting machine including any scaffold winch or give signals to operator.

    c) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or lowering or as means of suspension, safe working load shall be ascertained by adequate means. Every hoisting machine and all rear referred to above shall be plainly marked with safe working load. In case of a hoisting machine having a variable safe working load, each safe working load and the conditions under which it is applicable shall be clearly indicated. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond safe working load except for the purpose of testing.

    d) In case of a departmental machine, safe working load shall be notified by the Engineer – in - charge. As regards Contractor's machines the Contractor shall notify safe working load of each machine to the Engineer – in - charge whenever he brings it to site of work and get it verified by the Engineer – in - charge.

11. Motors gearing, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards; hoisting appliances shall be provided with such means as shall reduce to the minimum risk of accidental decent of load adequate precautions shall be taken to reduce to the minimum risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energised, insulating mats working apparel such as gloves, sleeves and boots as may be necessary, shall be provided. Workers shall not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

12. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in a safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.

13. These safety provisions shall be brought to the notice of all concerned by display on a notice board at a prominent place at the work spot. Persons responsible for ensuring compliance with the safety code shall be named therein by the Contractor.

14. To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the Contractor shall be open to inspection by the Engineer – in - charge or his representatives and the Inspecting Officers.

15. Notwithstanding the above conditions 1 to 14 the Contractor is not exempted from the operation of any other Act or Rule in force.

16. In addition to the above, the Contractor shall abide by the safety code provisions as per C.P.W.D. safety code framed from time to time.

17. The Contractor shall also arrange to obtain valid gate passes for his men and equipment from the concerned authorities of the project.

18. No man/material/equipment not covered by valid passes shall be permitted within the project area and no material/equipment shall be permitted to be taken out of the project area, unless the written permission of the Architect/Engineer in-charge.

19. When persons are employed on a roof where there is danger of falling from a height exceeding 3.25 m. (to be prescribed) suitable precaution shall be taken to prevent the fall of persons or material. Suitable precautions shall be taken to prevent persons being struck by articles which might fall from scaffolds or other working places.

20. The Contractor shall comply with the following regulations as regards the Hoisting Appliances to be used by him :

    (a) Hoisting machines and tackle, including their attachments, anchorage and supports shall :

        (i) be of good mechanical construction, sound material and adequate strength and free from patent defect; and :

        (ii) be kept in good repair and in working order.

    (b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of suitable quality and adequate strength and free from patent defect.

    (c) Hoisting machines and tackle shall be examined and adequately tested after erection on the site and before use and be re-examined in position at intervals to be prescribed by Architect and Engineer-in-Charge.

    (d) Every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering materials or as a means of suspension shall be periodically examined.

    (e) Every crane driver or hoisting-appliance-operator shall be properly qualified.

    (f) No person who is below age of 15 years shall be in control of any hoisting machine, including any scaffold, nor shall give signals to the operator.

    (g) In the case of every hoisting machine and of every chain, ring, hook, shackle, swivel and pull by block used in hoisting or lowering or as a means or suspension, the safe working load shall be ascertained by adequate means.

    (h) Every hoisting machine and all gears referred to in preceding regulation shall be plainly marked with the safe working load.

    (i) In the case of hoisting machine having a variable safe working load, each safe working load and conditions under which it is applicable shall be clearly indicated.

    (j) No part of any hoisting machine or any gear referred to in regulation `g' above shall be loaded beyond the safe working load except for the purpose of testing.

(k) Motors, gears, transmissions, electric wiring and other dangerous parts of hoisting appliance shall be provided with sufficient safeguards.

(l) Hoisting appliances shall be provided with such means as shall reduce to a minimum the risk of the accidental descent of the load.

(m) Adequate precautions shall be taken to reduce to minimum the risk of any part of a suspended load becoming accidentally displaced.

MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS EMPLOYED BY CONTRACTORS:

1. **Application**: These rules shall apply to all building and construction works in charge of Institute in which twenty or more workers are ordinarily employed or are proposed to be employed on any day during the period during which the contract work is in progress.

2. **Definition**: Work place means a place where twenty or more workers are ordinarily employed or are proposed to be employed in connection with construction work on any day during the period during which the contract work is in progress.

3. **First-Aid Facilities :**

(1) At every work place there shall be provided and maintained, so as to be easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed.

(2) The first-aid box shall be distinctly marked with a red cross on white ground and shall contain the following equipment, namely:--

a) For work places in which the number of contract labour employed does not exceed 50. Each first-aid box shall contain the following equipments:

(i) 6 small sterilised dressings.

(ii) 3 medium size sterilised dressings.

(iii) 3 large size sterilised dressings.

(iv) 3 large sterilised burn dressings.

(v) 1 (30 ml.) bottle containing a two per cent alcoholic solution of iodine.

(vi) 1 (30 ml.) bottle containing salvolatile having the dose and mode of administration indicated on the label.

(vii) 1 snake-bite lancet.

(viii) 1 (30 gms.) bottles of potassium permanganate crystals.

(ix) 1 pair scissors.

(x) 1 copy of the first-aid leaflet issued by the Director General, Factory Advice Service and Labour Institutes, Government of India.

(xi) 1 bottle containing 100 tablets (each of 5 gms.) of aspirin.

(xii) Ointment for burns.

(xiii) A bottle of suitable surgical antiseptic solution.

b) For work places in which the number of contract labour exceeds 50. Each first-aid box shall contain the following equipments:

(i) 12 small sterilised dressings.

(ii) 6 medium size sterilised dressings.

(iii) 6 large size sterilised dressings.

(iv) 6 large size sterilised burn dressings.

(v) 6 (15 gms.) packets sterilised cotton wool.

(vi) 1 (60 ml.) bottle containing a two per cent alcoholic solution of iodine.

(ix) 1 (60 ml.) bottle containing salvolatile having the dose and mode of administration indicated on the label.

(x) 1 roll of adhesive plaster.

(xi) 1 snake-bite lancet.

(xii) 1 (30 gms.) bottle of potassium permanganate crystals.

(xiii) 1 pair scissors.

(xii) 1 copy of the First-Aid leaflet issued by the Director General, Factory Advice Service and Labour Institute, Government of India.

(xiii) A bottle containing 100 tablets (each of 5 gms.) of aspirin.

(xiv) Ointment for burns.

(xv) A bottle of suitable surgical antiseptic solution.

(3) Adequate arrangements shall be made for immediate recoupment of the equipment when necessary.

(4) Nothing except the prescribed contents shall be kept in the first aid box.

(5) The First-Aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.

(6) A person in charge of the First-Aid box shall be a person trained in First-Aid treatment, in work places where the number of contract labour employed is 150 or more.

(7) In work places where the number of contract labour employed is 500 or more and hospital facilities are not available within easy distance of the works, First-Aid posts shall be established and run by a trained compounder. The compounder shall be on duty and shall be available at all hours when the workers are at work.

(8) Where work places are situated in places which are not towns or cities, a suitable motor transport shall be kept readily available to carry injured person or persons suddenly taken ill to the nearest hospital.

4. **Drinking water:**

(a) In every work place, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of cold water fit for drinking.

(b) Where drinking water is obtained from an intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.

(c) Every water supply of storage shall be at a distance of not less than 50 feet from any latrine, drain or other source of pollution. Where water has to be drawn from an existing well which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap-door which shall be dust and water proof.

(d) A reliable pump shall be fitted to each covered well, the trap-door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

5. **Washing facilities:**

(i). In every work place adequate and suitable facilities for washing shall be provided and maintained for the use of contract labour employed therein.

(ii). Separate and adequate screening facilities shall be provided for the use of male and female workers.

iii). Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition.

6. **Latrines and Urinals:**

(i). Latrines shall be provided in every work place on the following scale, namely:

a) Where females are employed, there shall be at least one latrine for every 25 females.

b) Where males are employed, there shall be at least one latrine for every 25 males.

Provided that where the number of males or females exceeds 100, it shall be sufficient if there is one latrine for 25 males or females, as the case may be, up to the first 100, and one for every 50 thereafter.

(ii) Every latrine shall be under cover and so partitioned off as to secure privacy and shall have a proper door and fastening.

(iii) **Construction of latrines:** The inside walls shall be constructed of masonry or some suitable heat resisting non-absorbent materials and shall be cement washed inside and outside at least once a year. Latrines shall not be of a standard lower than bore-hole system.

(iv) a) Where workers of both sexes are employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers "For Men only" or "For Women only" as the case may be.

b) The notice shall also bear the figure of a man or of a woman, as the case may be.

(v) There shall be at least one urinal for male workers up to 50 and one for female workers up to 50 employed at a time. Provided that where the number of male or female workmen, as the case may be, exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females up to the first 500 and one for every 100 or part thereof, thereafter.

(vi) a) The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times.

b) Latrines and urinals other than those connected with a flush sewerage system shall comply with the requirements of the Public Health Authorities.

(vii) Water shall be provided by means of a tap or otherwise so as to be conveniently accessible in or near the latrines and urinals.

(viii) Disposal of excreta: Unless otherwise arranged for by the local sanitary authority, arrangements for proper disposal of excreta by incineration at the work place shall be made by means of a suitable incinerator. Alternately excreta may be disposed off by putting a layer of night soil at the bottom of a pucca tank prepared for the purpose and covering it with a 15 cm. layer of waste or refuse and then covering it with a layer of earth for a fortnight (when it will turn into manure).

(ix) The contractor shall, at his own expense, carry out all instructions issued to him by the Engineer-in-Charge to effect proper disposal of soil and other conservancy work in respect of the contractor's workmen or employees on the site. The contractor shall be responsible for payment of any charges which may be levied by Municipal or Cantonment Authority for execution of such work on his behalf.

7. Provision of shelter during rest :

At every place there shall be provided, free of cost, four suitable sheds, two for meal, and the other two for rest separately for the use of men and women labour. The height of each shelter shall not be less than 3 metres from the floor level to the lowest part of the roof. These shall be kept clean and the space provided shall be on the basis of 0.6 Sq.m. per head.

8. **Creches:**

a) At every work place at which 20 or more women workers are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a play room for the children and the other as their bed-room. The rooms shall be constructed on a standard not lower than the following.

(i) Thatched roof

(ii) Mud floors and walls.

(iii) Planks spread over the mud floor and covered with matting.

b) The rooms shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean.

c) The contractor shall supply adequate number of toys and games in the play rooms and sufficient number of cots and beddings in the bed room.

d) The contractor shall provide one Dai to look after the children in the creche when the number of women workers does not exceed 50 and two Dais when the number of women workers exceeds 50.

e) The use of the rooms earmarked as creches shall be restricted to children, their attendants and mothers of the children.

9. **Canteens:**

(i) In every work place where the work regarding the employment of contract labour is likely to continue for six months and wherein contract labour numbering one hundred or more are ordinarily employed, an adequate canteen shall be provided by the contractor for the use of such contract labour.

(ii) The canteen shall be maintained by the contractor in an efficient manner.

(iii) The canteen shall consist of at least a dining hall, kitchen, store room, pantry and washing places separately for workers and utensils.

(iv) The canteen shall be sufficiently lighted at all times when any person has access to it.

(v) The floor shall be made of smooth and impervious material and inside walls shall be lime washed or colour washed at least once in each year:

Provided that the inside walls of the kitchen shall be lime washed every four months.

(vi) The precincts of the canteen shall be maintained in a clean and sanitary condition.

(vii) Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance.

(viii) Suitable arrangement shall be made for the collection and disposal of garbages.

(ix) The dining hall shall accommodate at a time 30 per cent of the contractor labour working at a time.

(x) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs shall not be less than one square metre per diner to be accommodated as prescribed in sub-rule.

(xi) a) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers, in proportion to their number.

b) Washing places for women shall be separate and screened to secure privacy.

(xii) Sufficient tables, stools, chairs or benches shall be available for the number of diners to be accommodated as prescribed in sub-rule (ix).

(xiii) (a) (1) There shall be provided and maintained sufficient utensils, crockery, furniture and any other equipments necessary for the efficient running of the canteen.

(2) The furniture, utensils and other equipments shall be maintained in a clean and hygienic condition.

(b) (1) Suitable clean clothes for the employees serving in the canteen shall be provided and maintained.

(2) A service counter, if provided, shall have top of smooth and impervious material.

(4) Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipments.

(xiv) The food stuffs and other items to be served in the canteen shall be in conformity with the normal habits of the contract labour.

(xv) The charges for food stuffs, beverages, and any other items served in the canteen shall be based on No profit, No loss and shall be conspicuously displayed in the canteen.

(xvi) In arriving at the price of food stuffs and other articles served in the canteen, the following items shall not be taken into consideration as expenditure, namely:--

(a) The rent of land and buildings;

(b) The depreciation and maintenance charges for the building and equipments provided for the canteen;

(c) The cost of purchase, repairs and replacement of equipments including furniture, crockery, cutlery and utensils;

(d) The water charges and other charges incurred for lighting and ventilation;

(e) The interest and amounts spent on the provision and maintenance and equipments provided for in the canteen.

(xvii) The accounts pertaining to the canteen shall be audited once every 12 months by registered accountants and auditors.

10. **Anti-Malarial Precautions:**
The contractor shall at his own expense, conform to all anti-malarial instructions given to him by the Engineer-in-Charge including the filling up of any borrow pits which may have been dug by him.

11. **Amendments:** Institute may, from time to time, add to or amend these rules and issue such directions as it may consider necessary for the purpose of removing any difficulty which may raise in the administration thereof.

CONTRACTORS LABOUR REGULATIONS:

1. **Short Title:**

These regulations may be called the "Contractors Labour Regulations".

2. **Definitions:**

i) **"Workmen**" means any person employed by the Contractor directly or indirectly through a sub-contractor, with or without the knowledge of the Institute, to do any skilled, semi-skilled or unskilled manual, supervisory, technical or clerical work for hire or reward, whether the terms of employment are expressed or implied but does not include any person—

a) Who is employed mainly in a managerial or administrative capacity; or

b) Who, being employed in a supervisory capacity draws wages exceeding five hundred rupees per mensem or exercise either by the nature of the duties attached to the office or by reason of powers vested in him, functions mainly of managerial nature;

c) Who is an out worker, that is to say, a person to whom any article or materials are given out by or on behalf of the principal employer to be made up, cleaned, washed, altered, ornamental finished, repaired, adopted or otherwise processed for sale for the purposes of the trade or business of the principal employer and the process is to be carried out either in the; home of the out worker or in some other premises, not being premises under the Control and management of the principal employer,

ii) **"Fair Wages"** means wages whether for time or piece work fixed and notified under the provisions of the Minimum Wages Act from time to time.

iii) "Contractors" shall include every person who undertakes to produce a given result other than a mere supply of goods or articles of manufacture through contract labour or who supplies contract labour for any work and includes a sub-contractor.

iv) **"Wages"** shall have the same meaning as defined in the payment of wages act.

2(a) Normally working hours of an adult employee should not exceed 9 hours a day. The working day shall be so arranged that inclusive of interval for rest, if any, it shall not spread over more than 12 hours on any day.

2(b) When an adult worker is made to work for more than 9 hours on any day or for more than 48 hours in any week he shall be paid over time for the extra hours put in by him at double the ordinary rate of wages. Children shall not be made to work extra hours.

2(c) (i) Every worker shall be given a weekly holiday normally on a Sunday, in accordance with the provisions of the Minimum Wages (Central) Rules, 1960 as amended from time to time irrespective of whether such worker is governed by the Minimum Wages Act or not.

(ii) Where a Minimum Wages prescribed by the Government under the Minimum Wages Act are not inclusive of the wages for the weekly day of rest, the worker shall be entitled to rest day wages at the rate applicable to the next preceding day, provided he has worked under the same contractor for a continuous period of not less than 6 days.

(iii) Where a contractor is permitted by the Engineer-in-Charge to allow a worker to work on a normal weekly holiday, he shall grant a substituted holiday to him for the whole day on one of the five days immediately before or after the normal weekly holiday and pay wages to such worker for the work performed on the normal weekly holiday at over time rate.

3. **Display of Notice regarding wages etc.:**

The contractor shall before he commences his work on contract, display and correctly maintain and continue to display and correctly maintain in a clean and legible condition in conspicuous places on the work, notices in English and in the local Indian languages spoken by the majority of the workers, giving the minimum rates of wages fixed under the Minimum Wages Act, the actual wages being paid, the hours of work for which such wages are earned, wage periods, dates of payment of wages and other relevant information as per Annexure "A"

4. **Payment of Wages:**

(i) The contractor shall fix wage periods in respect of which wages shall be payable.

(ii) No wage period shall exceed one month.

(iii) The wages of every person employed as contract labour in an establishment or by a contractor where less than one thousand, such persons are employed shall be paid before the expiry of the seventh day and in other cases before the expiry of tenth day after the last day of the wage period in respect of which the wages are payable.

(iv) Where the employment of any work is terminated by or on behalf of the contractor. the wages earned by him shall be paid before the expiry of the second Working day from the date on which his employment is terminated.

(v) All payments of wages shall be made on a working day at the work premises and during the working time and on a date notified in advance and in case the work is completed before the expiry of the wage period, final payment shall be made within 48 hours of the last working day.

(iv) Wages due to every worker shall be paid to him direct or to other person authorised by him in this behalf.

(v) All wages shall be paid in current coin or currency or in both.

(viii) Wages shall be paid without any deductions of any kind except those specified by the Central Government by general or special order in this behalf or permissible under the payment of Wages Act, 1956.

(ix) A notice showing the wages period and the place and time of disbursement of wages shall be displayed at the place of work and a copy sent by the contractor to the Engineer-in-Charge under acknowledgement.

(x) It shall be the duty of the contractor to ensure the disbursement of wages in the presence of the Engineer-in-Charge or any other authorised representative of the Engineer-in-Charge who will be required to be present at the place and time of disbursement of wages by the contractor to workmen.

(xi) The contractor shall obtain from the Engineer-in-Charge or any other authorised representative of the Engineer-in-Charge as the case may be, a certificate under his signature at the end of the entries in the "Register of wages" or the "Wage-cum-Muster Roll" as the case may be in the following form:

"Certified that the amount shown in column No._____ has been paid to the workmen concerned in my presence on _____at _____”.

5. **Fines and deductions which may be made from wages**:

(i) The wages of a worker shall be paid to him without any deductions of any kind except the following:

a) Fines.

b) Deductions for absence from duty i.e. from the place or the places where by the terms of his employment he is required to work. The amount of deduction shall be in proportion to the period for which he was absent.

c) Deduction for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money or any other deduction which he is required to account, where such damage or loss is directly attributable to his neglect or default.

d) Deduction for recovery of advances or for adjustment of over-payment of wages; advances granted shall be entered in a register.

e) Any other deduction which the Central Government may from time to time allow.

(ii) No fines should be imposed on any worker save in respect of such acts and omissions on his part as have been approved of by the Chief Labour Commissioner.

Note: An approved list of acts and omissions for which fines can be imposed is enclosed at Annexure-I.

(iii) No fine shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.

(iv) The total amount of fine which may be imposed in anyone wage period on a worker shall not exceed an amount equal to three paise in a rupee of the total wages, payable to him in respect of that wage period.

(v) No fine imposed on any worker shall be recovered from him by installment, or after the expiry of sixty days from the date on which it was imposed.

(vi) Every fine shall be deemed to have been imposed on the day of the act or omission in respect of which it was imposed.

6. **Labour Records:**

(i.) The contractor shall maintain a "Register of persons employed" on work on contract in Form XIII of the CL (R&A) Central Rules, 1971 (Annexure-B).

(ii.) The contractor shall maintain a "Muster Roll" register in respect of all workmen employed by him on the WI) under contract in form XVI of the CL (R&A) Rules, 1971 (Annexure-C).

(iii.) The contractor shall maintain a "Wage Register" in respect of all workmen employed by him on the work under contract in form XVII of the CL (R&A) Rules, 1971 (Annexure-D).

(iv.) Register of accidents: The contractor shall maintain a register of accidents in such form as may be convenient the work place but the same shall include the following particulars:

a) Full particulars of the labourers who met with accident.

b) Rate of wages.

c) Sex.

d) Age.

e) Nature of accident and cause of accident.

f) Time and date of accident.

g) Date and time when admitted in Hospital.

h) Date of discharge from Hospital.

i) Period of treatment and result of treatment.

j) Percentage of loss of earning capacity and disability as assessed by Medical Officer.

k) Claim required to be paid under workmen's Compensation Act.

l) Date of payment of compensation.

m) Amount paid with details of the person to whom the same was paid.

n) Authority by whom the compensation was assessed.

o) Remarks.

(v) **Register of Fines**: The contractor shall maintain a "Register of Fines" in the form XII of the CL (R&A) Rules, 1971 (Annexure-H).

The contractor shall display in a good condition and in a conspicuous place of work the approved list of Acts and omissions for which fines can be imposed (Annexure-I).

(vi) **Register of Deductions:** The contractor shall maintain a "Register of deductions for damage or loss" in Form XX of the CL (R&A) Rules, 1971 (Annexure-J).

(vii) **Register of Advances**: The contractor shall maintain a "Register of Advances" in form XXII of the CL (R&A) Rules, 1971 (Annexure-K).

(viii) **Register of Overtime:** The contractor shall maintain a "Register of Overtime" in form XXIII of the CL (R&A) Rules, 1971 (Annexure-L).

7. **Attendance Card-cum-Wage slip:**

(i) The contractor shall issue an attendance card-cum-wage slip to each workman employed by him in the specimen format (Annexure-E).

(ii) The card shall be valid for each wage period.

(iii) The contractor shall mark the attendance of each workman on the card twice each day, once at the commencement of the day and again after the rest interval, before he actually starts work.

(iv) The card shall remain in possession of the worker during the wage period under reference.

(v) The contractor shall complete the wage slip portion on the reverse of the card at least a day prior to the disbursement of wages in respect of the wage period under reference.

(vi) The contractor shall obtain the signature or thumb impression of the worker on the wage slip at the time of disbursement of wages and retain the card with himself.

8. **Employment Card :**

The contractor shall issue an Employment Card in form XIV of the CL (R&A) Central Rules, 1971 to each worker within three days of the employment of the worker (Annexure-F).

9. **Service Certificate:**

On termination of employment for any reason whatsoever the contractor shall issue to the workman whose services have been terminated, a service certificate in form XV of the CL (R&A) Central Rules, 1971 (Annexure-G).

10. **Preservation of Labour Records**:

All records required to be maintained under Regulations Nos. 6 and 7 shall be preserved in original for a period of three years from the date of last entries made in them and shall be made available for inspection by the Engineer-in-Charge, Labour Officer or any other officers authorised by the Department of Works and Housing in this behalf.

11. **Power of Labour Officers to make investigations or enquiry:**

The Labour Officer or any other person authorised by Central Government on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper, observance of the Fair Wages Clauses and the Provisions of Regulations. He shall investigate into any complaint regarding the default made by the contractor or sub-contractor in regard to such provision.

12. **Report of Labour Officer:**

The Labour Officer or other persons authorised as aforesaid shall submit a report of result of his investigation or enquiry to the Engineer-in-Charge concerned indicating the extent, if any, to which the default has been committed with a note that necessary deductions from the contractor's bill be made and the wages and other dues be paid to the labourers concerned. In case an appeal is made by the contractor under Clause 13 of these regulations, actual payment to labourers will be made by the Engineer-in-Charge after the Manager (M & L) has given his decision on such appeal.

(a) The Engineer-in-Charge shall arrange payments to the labour concerned within 45 days from the receipt of the report from the Labour Officer or the Manager (M & L) as the case may be.

13. **Appeal against the decision of Labour Officer:**

Any person aggrieved by the decision and recommendations of the Labour Officer or other person so authorised may appeal against such decision to the Manager (M & L) concerned within 30 days from the date of decision, forwarding simultaneously a copy of his appeal to the Engineer-in-Charge concerned but subject to such appeal, the decision of the Officer shall be final and binding upon the contractor.

14. **Prohibition regarding representation through lawyer:**

(i) A workman shall be entitled to be represented in any investigation or enquiry under these regulations by:-

a) An officer of a registered trade union of which he is a member.

b) An officer of a federation of trade unions referred to in clause (a) is affiliated.

c) Where the employer is not a member of any registered trade union, by an officer of a registered trade union, connected with, or by any other workman employed in the industry in which the worker is employed.

(ii) An employer shall be entitled to be represented in any investigation or enquiry under these regulations by-

a) An officer of an association of employers of which he is a member.

b) An officer of a federation of associations of employers to which association referred to in Clause (a) is affiliated.

c) Where the employer is not a member of any association of employers, by an officer of association of employer, connected with, or by any other employer engaged in the industry in which the employer is engaged.

(iii) No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry under these regulations.

15. **Inspection or Books and slips:**

The contractor shall allow inspection of all the prescribed labour records to any of his workers or to his agent at a convenient time and place after due notice is received or to the Labour Officer or any other person, authorised by the Central Government on his behalf.

16. **Submission of Returns:**

The contractor shall submit periodical returns as may be specified from time to time.

17. **Amendments:**

The Central Government may, from time to time, add to or amend the regulations and on any question as to the application, interpretation or effect of those regulations the decision of the Manager (M & L) concerned in that behalf shall be final.

LIST OF ACTS AND OMISSIONS FOR WHICH FINES CAN BE IMPOSED:

In accordance with rule 5 of the Labour Regulations to be displayed prominently at the site of work in both English and local language.

1. Wilful insubordination or disobedience, whether alone or in combination with other.
2. Theft, fraud or dishonesty in connection with the contractors beside a business or property of Institute.
3. Taking or giving bribes or any illegal gratifications.
4. Habitual late attendance.
5. Drunkenness fighting, riotous or disorderly or indifferent behaviour.
6. Habitual negligence.
7. Smoking near or around the area where combustible or other materials are locked.
8. Habitual indiscipline.
9. Causing damage to work in the progress or to property of the Institute or of the contractor.
10. Sleeping on duty.
11. Malingering or slowing down work.
12. Giving of false information regarding name, age, father's name etc.
13. Habitual loss of wage cards supplied by the employers.
14. Unauthorized use of employer's property for manufacture or making of unauthorized articles at the work place.
15. Bad workmanship in construction and maintenance by skilled workers which is not approved by the Institute and for which the contractors are compelled to undertake rectifications.
16. Making false complaints and/or misleading statements.
17. Engaging on trade within the premises of the establishments.
18. Any unauthorised divulgence of business affairs of the employees.

19. Collection or canvassing for the collection of any money within the premises of an establishment unless authorized by the employer.

20. Holding meeting inside the premises without previous sanction of the employers.

21. Threatening or intimidating any workman or employee during the working hours within the premises.

APPENDIX

This appendix forms a part of tender document. The clauses mentioned herein are considered to be final. In case of discrepancy between clauses of Appendix and corresponding clauses of tender document, clauses mentioned in the Appendix shall govern.

1	Employer	:	**Register Office Address:** **Pandit Deendayal Energy University,** Village - Raysan District - Gandhinagar – 382 426. **Correspondence Address:** Chief campus manager PDEU, Gandhinagar.
2	Architect	:	**HCP Design Planning and Management Pvt. Ltd.** Paritosh, Usmanpura, Ahmedabad – 380 013.
3	Site Address	:	**Pandit Deendayal Energy University** Raysan Village, Nr. Koba Circle, Gandhinagar – 382 426.
4	Name of Work	:	**Tender for Extension of wing in Block E at PDEU campus, Gandhinagar**
5	Scope of Work	:	**Extension of wing in Block E** 1. Total construction area (Built up) – approx. 1,400 Sqm. 2. Building is RCC framed structure, plastered from inside and outside. 3. Civil work (including doors and windows), plumbing, electrical, ELV works
6	Time Limit / Period of completion of the works	:	Overall completion time: **6 Months**
7		:	**Information about Tender Document**
7.1	Tender Fees	:	**NIL**
7.2	Tender Issue:	:	**Dt. 22/09/2022** **Contact Mr. Ashutosh Vyas Mo. 9924633224**
7.3	Pre Bid Queries	:	**Dt. 28/09/2022** Contact Mr. Ashtosh Vyas Mo. 9924633224 Mail on fma@pdpu.ac.in and hardik.baldania@hcp.co.in
7.4	Tender Submission	:	**By 07/10/2022 @ 03:30 pm.** Address: At “Site Address” as specified above
7.5	Tender Opening	:	**Will be informed** Address: At “Site Address” as specified above

7.6	Tender Validity	:	90 days from the submission of Tender
8	Defects Liability Period	:	**12 months** from the date of issue of "Virtual Completion Certificate"
9	Earnest Money Deposit	:	**Rs. 5,00,000/-** in form of DD / Pay order in favour of **Pandit Deendayal Energy University** payable at Gandhinagar.
10	Security Deposit	:	**10% of the contract value (inclusive of EMD)** to be given by the way of FD/DD/Bank Guarantee at the time of award of the contract in name of Client or as per the format given Client.
11	Release of SD	:	
11.1	2.5% (25% of 10% SD)	:	On completion of the work amounting **50% of the contract value**
11.2	2.5% (25% of 10% SD)		On completion of the work amounting **75% of the contract value**
11.3	2.5% (25% of 10% SD)		On Architect's **Virtual completion certificate of the works.**
11.4	2.5% (Balance 25% of 10% SD)		**After rectification of the defects,** if any, pointed out during the defects liability period
12	Retention Money	:	**10 % from each running bill** (cash) subject to a **maximum limit of 5%** of the "Contract value or Project cost whichever is higher".
13	Release of retention money	:	
	1.25% (25% of retention amount)		On Architect's **certificate of virtual completion of the works**.
	3.75% (Balance 75% of retention amount)		After **rectification of the defects, if any,** pointed out during the defects liability period.
14	Total Retention	:	**Total 15% as follows:** a) **10% of contract value in form of Security Deposit** (as specified in 10 above). b) **5% of contract value or total project cost,** whichever is higher (as specified in 12 above).
15	Mobilization Advance	:	**5% of the contract amount** of the project against submission of the bank guarantee of the equivalent amount of any of the nationalised bank in the prescribed format. **No interest shall be charged for the mobilisation advance.** Out of which, **2.5%** of the contract amount shall be released with the work order and balance **2.5%** of the contract amount shall be released only after actual mobilisation at site.
16	Recovery of Mobilization advance	:	The recovery of the advance shall commence from the **first R.A. bill and in three equal instalments**.
17	Material Advance	:	**-**

18	Recovery of Material Advance	:	-
19	Value of works for interim certificates	:	**The value of the monthly bill shall be minimum 10% of the contract value. A maximum of 8 running bills shall be allowed during the entire project execution**
20	Liquidated damages		
	Penalty for delay in completion time	:	**0.30% of contract value per day** subject to maximum limit of 10% of the "Contract value".
21	Payments:		
21.2	Period of honouring certificates and payments	:	**30 days**
21.3	Period of honouring final measurements	:	**30 days** from Virtual Completion or date of submission of final bill whichever is later.
21.4	All payment made by the Employer shall be payable at	:	**Gandhinagar**
22	Other Charges		
22.1	Charges for Electrical Power Supply	:	**Shall be recovered at actual from each running bill.** Client shall arrange the power supply at one point and contractor has to arrange to borrow power from that point onwards via approved Energy meter (To be installed by the contractor).
22.2	Water charges	:	Water charges shall be recovered @ 0.5% from each running bill which includes the cost of electricity for the same
22.3	Extra items	:	Contractor shall carry out work for Extra Items only with the prior written approval from EIC & Architect. In absence of the same any claim on account of Extra Item shall not be considered by Client for further payments. On certification of rate analysis which covers cost of material, labour, actual taxes, duties, and profit & overheads @ 10%.
22.4	Escalation	:	No escalation to be given.
23	Insurance to be covered up by the Contractor	:	1) Workmen's Compensation 2) Contractor's All Risk (CAR) policy 3) Third party
24	Tender Rate	:	The rates shall also be firm and not subject to exchange variations, labour conditions, fluctuations in railway freights or any conditions whatsoever. It shall also include for sales tax, excise duty, VAT, octroi and any other taxes/duty or other levy levied by the Central or State Governments or local authorities, sales tax on works contract (if applicable) as on the date of signing of the tender document. No claim in respect to the

			variation in above mentioned taxes shall be considered for payment, by the Employer, as an extra amount till the work is completed. **The rates of the items to be quoted shall be inclusive of GST.**

Tender for Extension of wing in Block E at PDEU campus, Gandhinagar

<u>Tender Summary & BOQ</u>

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Project : Construction of Extention of 1 Wing for Block E
Client : PDEU - Gandhinagar
Sub : Tender Estimate for Civil, Plumbing, Electrical and ELV Works

Section	Description	Amount (Rs)
A	**Civil Works**	
CW 02.00	PCC & RCC works	
CW 03.00	Centering & Form works	
CW 04.00	Masonry works	
CW 05.00	Doors/ Windows works	
CW 07.00	Plastering & Pointing works	
CW 08.00	Waterproofing works	
CW 09.00	Paving & Floor Finishing works	
CW 10.00	Iron & steel works	
CW 11.00	Painting & Polishing works	
CW 16.00	Misc Items	
CW 17.00	Demolition works	
A1	**Total of Civil Works**	
B	**Plumbing Works**	
PW 01.00	Water Supply	
PW 02.00	Sanitary Installations	
PW 03.00	Internal Plumbing	
PW 04.00	Rain Water Disposal	
PW 05.00	Plant & Equipment	
B1	**Total of Civil Works**	
C	**Electrical & ELV Works**	
1	MV Switchgear	
2	Distribution Board	
3	Cable Trench	
4	MV Cabling	
5	Cable Termination	
6	Cable Tray	
7	Internal Wiring	
8	Light Fixtures and Fans	
9	Earthing	
10	Miscellaneous	
11	ELV Provision Work	
12	Removing Work	
C1	**Total of Electrical & ELV Works**	
	Total Project Cost	
	Rebate	
	Total Project Cost After Rebate	

Project : Construction of Extention of 1 Wing for Block E
Client :PDEU - Gandhinagar
Sub : Tender Estimate for Civil, Plumbing, Electrical and ELV Works
Note: Rates should be quoted with GST.

Item nos.	Description of Work	Unit	Qty	Rate	Amount
CIVIL WORKS					
	Section 2.00 PCC & RCC Work				
	General Note : All Concrete shall be machine batched, machine mixed and machine vibrated design mix fair finish / smooth finish reinforced cement concrete with minimum cement content as per grade (with /without fly ash as per item description) and as per latest IS 456 for all PCC & RCC elements of all shape, all size, at all places and heights/ depths including transporting, laying of concrete to site by any means like pumping or tower crane etc., finishing and curing etc. and including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete as per direction of Engineer-in-charge. Rate shall be inclusive of providing grooves, drip moulds, ghisis, pockets, cutouts etc. and labour for insert sleeves if any wherever required while casting. Rate also to include lift charges and scaffolding for all heights / depths from FFL / GL. (unless otherwise specified)				
2.01	Providing and laying in position machine batched, machine mixed **plain cement concrete (PCC)** of specified grade including all leads and lift/depth, compaction, vibration, curing, transporting and pumping wherever necessary including the cost of form work (if required) and removal of formwork etc. complete as directed by the Engineer.				
	M15 Grade PCC	Cum	11		
2.02	Supplying, fabricating and placing in position **reinforcement bars** confirming to IS-1786 reinforcement for RCC structure / items as per design including transporting steel to the work site, handling, decoiling, cutting, bending, cranking, fabricating to required shape, placing in position, binding with 18 guage (1.22 mm) GI wires, welding if necessary by using approved welding rods etc. for all levels, all place, all height as per drawing etc. complete as directed by the engineer-in-charge. The quoted rate should be inclusive the cost of binding wire, chairs, pins, brackets and the same will not be measured and paid separately. (rolling margin's and wastage shall not be paid.) Measurement will be made on the length basis and converted into weight by using standard co-efficient). The reinforcement shall be -				
	TMT bars- Fe-500 D	Kg	68,937		
2.03	Providing and laying in position machine mixed, machine batch, machine vibrated, design mix cement concrete for **reinforced cement concrete work of M20 grade** using graded black trap stone aggregates of maximum 20mm nominal (down graded) size obtained from approved quarry including fine aggregates conforming to latest IS 383 with minimum cement content (without fly ash) for durability shall be followed as per approved design mix and latest IS 456 (whichever is higher) for all elements of any shape and size, at all places and heights/ depths including transporting to site continuous agitating mixer, laying of concrete to site by any means like pumping or tower crane etc., vibrating, finishing and curing etc. and including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, to improve workability without impairing strength and durability as per direction of Engineer-in-charge. Rate shall be inclusive of providing grooves, drip moulds, ghisis, pockets, cutouts etc. and labour for insert sleeves if any wherever required while casting. Rate also to include lift charges and scaffolding for all heights / depths. (for all civil, plumbing & electrical works).				
	exclude the cost of formwork & reinforcement	Cum	93		
2.04	Providing and laying in position machine mixed, machine batch, machine vibrated, design mix cement concrete for **reinforced cement concrete work of M25 grade** using graded black trap stone aggregates of maximum 20mm nominal (down graded) size obtained from approved quarry including fine aggregates conforming to latest IS 383 with minimum cement content (without fly ash) for durability shall be followed as per approved design mix and latest IS 456 (whichever is higher) for all elements of any shape and size, at all places and heights/ depths including transporting to site continuous agitating mixer, laying of concrete to site by any means like pumping or tower crane etc., vibrating, finishing and curing etc. and including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, to improve workability without impairing strength and durability as per direction of Engineer-in-charge. Rate shall be inclusive of providing grooves, drip moulds, ghisis, pockets, cutouts etc. and labour for insert sleeves if any wherever required while casting. Rate also to include lift charges and scaffolding for all heights / depths. (for all civil, plumbing & electrical works).				
	exclude the cost of formwork & reinforcement	Cum	397		
2.05	Providing and laying in position machine mixed, machine batch, machine vibrated design mix cement concrete for **reinforced cement concrete work of M30 grade** using graded black trap stone aggregates of maximum 20mm nominal (down graded) size obtained from approved quarry including fine aggregates conforming to latest IS 383 with minimum cement content (without fly ash) for durability shall be followed as per approved design mix and latest IS 456 (whichever is higher) for all elements of any shape and size, at all places and heights/ depths including transporting to site continuous agitating mixer, laying of concrete to site by any means like pumping or tower crane etc., vibrating, finishing and curing etc. and including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, to improve workability without impairing strength and durability as per direction of Engineer-in-charge. Rate shall be inclusive of providing grooves, drip moulds, ghisis, pockets, cutouts etc. and labour for insert sleeves if any wherever required while casting. Rate also to include lift charges and scaffolding for all heights / depths. (for all civil, plumbing & electrical works).				
	exclude the cost of formwork & reinforcement	Cum	11		

Project : Construction of Extention of 1 Wing for Block E
Client :PDEU - Gandhinagar
Sub : Tender Estimate for Civil, Plumbing, Electrical and ELV Works
Note: Rates should be quoted with GST.

Item nos.	Description of Work	Unit	Qty	Rate	Amount
2.06	Providing and wet drilling accurate and clean holes of specified diameter in RCC walls, slabs, beam or any other RCC member without vibration by core cutting (diamond drilling) machine of approved make for laying service lines including scaffolding, safety majors, disposing the debris, cleaning, making good, providing epoxy mortar/ micro concrete/ patch repair mortar/ Non shrink grout for concrete for grouting the gaps around the pipes for all levels/ all height, after approval of engineer in charge etc compete. Measurement shall be taken for the depth of holes in running meter for specified diameter. Holes shall made by authorized approved agency. Scanning of reinforcement shall be carried out before core cutting if required and as suggested by Engineer in charge. Location of core cutting shall be approved by Engineer in charge.				
a)	Diameter of holes of 52 mm clear	Rmt	11		
b)	Diameter of holes up to 77 mm clear	Rmt	11		
c)	Diameter of holes up to 102 mm clear	Rmt	11		
d)	Diameter of holes up to 152 mm clear	Rmt	11		
2.07	Providing in position rigid PVC pipe sleeves of 6Kg/cm2 and length as per design for following diameters for services wherever pipes pass through walls/ slabs/ beam before concreting. All pipes shall be accurately cut to the required sizes, laid as per drawing, kept in the position while laying reinforcement and shuttering, sleeves shall not get displaced while concreting, and burrs removed before laying. Open ends of the pipe shall be closed as the pipe is installed to avoid clogging while concreting. Measurement shall be taken up to two decimal. (minimum 0.01 mt.). Rate shall be inclusive of removal of sleeves before water proofing or grouting. For all floors/ all levels/ all heights. Location of sleeve shall be approved by Engineer in charge.				
a)	75mm Diameter	Rmt	11		
b)	110mm Diameter	Rmt	11		
c)	160mm Diameter (QRO Item)	Rmt	11		
d)	200mm Diameter (QRO Item)	Rmt	11		
	Sum Carried to Summary Page				
	Section 3.00 Centering & Form Works				
3.01	Providing **ordinary formwork with shuttering plywood/ steel sheathing and steel supporting system** so as to give fair finish, including centering, shuttering and propping, etc. complete, height of propping and centering below supporting floor to ceiling not **exceeding 5.0 m.**, and removal of the same for in-situ reinforced concrete, in foundations, footings, bases of columns, walls, columns, slabs, beams, sills, lintel, coping, stair etc. for all heights, levels, shapes and locations. (for all civil, plumbing & electrical works).	Sqm	2,996		
	Sum Carried over to summary page				
	Section - 4.00 Masonary Works				
4.01	Providing and laying **Bricks masonry works** using common burnt clay conventional building bricks confirming to IS 1077-1986 of having crushing strength not less than 35 Kg/cm2 including curing, scaffolding, racking / flush jointing etc. complete, as directed. (For all civil, plumbing & electrical works).				
b)	**Super structure** above plinth for all levels, location, shapes etc. i) **C.M 1:5**	Cum	336		
4.02	Providing and laying **Half brick, 115 thick masonry** using common burnt clay conventional building bricks confirming to IS 1077-1986, having crushing strength not less than 35 Kg/cm2, for all floors / all heights / all levels, in any shape, in any position, including curing, scaffolding, etc. complete, as directed (for all civil, plumbing & electrical works).				
	ii) **C.M 1:4**	Sqm	216		
	Sum Carried over to summary page				
	Section - Doors & Window				
5.01	**Aluminium Work :** Providing and fixing in position frames/ shutter for any type of aluminium work like aluminium door, composite door-window, window (sliding, openable, side hung, top hung, fixed etc.), casement window, aluminium partition, aluminium fixed louvers, fixed window with any type of aluminium sections of make Jindal/ Indal/ Hindalco as per approved make having minimum 50 micron pure polyester powder coating of approved shade, texture & colour of approved make for all floors/ all levels/ all heights/ all shapes/ all sizes including cutting, bending, crimping, fabricating in best workmanship manner etc as per the drawing, specification and as directed by Architect or Engineer-in-Charge. Rate shall be inclusive of providing aluminium sections (conventional and/ or Euro-profile sections), cutting, fabrication, errection and fixing to the best workmanship manner, including	Kg	2,318		
	1) Sheet metal screws and casted solid aluminum corner cleats fixed with external byttins with a spring for rapid and secure joint assembly for casement and sliding shutter and frame; 2) Glazing clips for receiving infill panel; 3) Best quality wool pile where ever shutter touches the frame and compatible microwave cured EPDM rubber; 4) Dash Anchor fasteners of HILTI or equivalent for fixing the frame assembly to the RCC or masonry surfaces. Minimum 1 anchor fastener shall be used for every 600 mm length of section for stability of frame. 5) 10mm GI tie rod for connecting vertical stile at top and bottom for aluminum door shutter and 4mm thick solid aluminium corner cleat of full thickness of section for connecting style and horizontal rails; 6) providing and fixing packing at every 600mm c/c of average 6 mm compact sheet of width (equal to section width less 30mm for backer rod and sealant); 7) Filling the gap between wall and frame on both sides (outside and inside) with polyethylene baker rod of avg. 10 mm thickness of approved make and color and then sealing the remaining gap with neutral grade G/M (Glazed & Metal) weather silicon sealant of approved make and color. 8) Termite treated seasoned teak wood as infill material to installed hardware in door shutter and frame as and when required but excluding. 1) necessary hardware; 2) Glazing or paneling material and shutter. Shop drawing shall be prepared and get approved from the consultants before procurement of material by the contractor. Work shall carried out as per the approved shop drawings and approved sample. Actual weight of installed Aluminium sections which are visible shall only be measured and shall be considered for the payment				

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
5.05.1	Providing and fixing **glazing with 6mm thick clear toughen glass** of specified thickness in aluminium door, window, ventilator shutters and partitions etc. Including EPDM rubber on the periphery of the glass, snap beading, glazing clips, neutral cure weather Silicone sealant of Dow corning 789 of approved shade etc. complete for all height / all levels / all floor in all shapes as per the architectural drawings and directions of engineer-in-charge. Installed area of glass shall be measured and paid and without any wastage. In case of half round/ round shape windows, rectangular/ square area shall be measured and paid.	Sqm.	161		
5.14.2	Providing and fixing **6 mm thick wired glass** of approved make and specified thickness in frame work with necessary cutting of glass as per approved shop drawing & specifications including providing and fixing EPDM quality rubber on the periphery of the glass, snap beading, glazing clips, neutral cure weather Silicone sealant of Dow corning 789 etc. complete etc. complete for all floors, all levels, all heights and in all shapes as per the directions of Architect/ Engineer-in-charge. Actual installed area shall be measured and paid. In case of half round/ round shape windows, rectangular/ square area shall be measured and paid.	Sqm.	32		
	Providing and fixing aluminium **operable system louvers** of 50 micron Pure Polyester Powder Coating of approved shade & colour and texture manufactured by Techanal, Domal, Sai aluminium - Shashal or equivalent with operating mechanism frame louver with gasket and piles. The corner joints of the frame shall be made at 45 degree using die-cast solid aluminium corner cleats fixed with external byttins with a spring for rapid and secure joint assembly. Gaskets shall be of EPDM material. Work shall be carried out in the existing door/ window frame as per sample approved by Architect / EIC. Operating panel should be provided as per drawing. Actual (out to out dimension of louver frame) measurement of system with louvers shall be measured and paid in sqmt. Rate should be inclusive of aluminium sub frame for housing operating system. Contractor shall prepeare shop drawing with design calculation considering all parameter and submit to concern authority suggested by client for structural approval. And architectural approval shall be given by consultant.	Sqm.	29		
	Providing and fixing laminated **Compact Sheet** of any size, any shape, any color, any texture as per approved sample (approved by architect) and specified thickness in aluminium frame and shutter work with necessary cutting of sheet, single side, double side coloured as per drawing & specifications including providing and fixing EPDM quality rubber/ silicon sealant/ adhesive tape/ screwing on the periphery of the sheet as per the required thickness etc. complete at all floors/ all levels/ all heights as per the drawing & directed by EIC / Architect. Cut edges of the compact sheet shall be provided with masking tape. Actual installed quantity shall be measured and paid. Rate shall be inclusive of all type of wastage.	Sqm	30		
	Hardware : *General Notes for Hardware: Supplying and fixing heavy quality fixtures and fittings for doors, windows, ventilators, partition wall, cabinets with necessary screws, nails, machine pins etc. at all floor/ all levels/ all heights complete. The fittings and fixtures hardware as described in items or of make approved by Architect. Sample shall be approved before execution. As per description, SS hardware shall be of 304 grade or 316 grade according to approved make. The fixture & fastenings shall be provided as under:*				
5.15	Providing & fixing **single/ double action hydraulic floor spring** with SS cover plate & adjustable concealed casted top pivot (two piece) and bottom strap of approved make for wooden/ aluminium doors of specified capacity with minimum one year guarantee. Rate shall be inclusive of cutting of floor neatly, grouting the floor spring & cleaning/ polishing the floor & maintaining in good working condition until defect liability period. In case of Aluminium shutter bottom arm of floor spring & top pivot shall be firmly fixed in the aluminium members using required size of teak wood by making rabbet in the wood. The Floor Spring shall conform to EN 1154. **a) Hold open having weight up to 100 kg and width upto 1200mm with std. spindle and cover plate. Closing force complying with EN 1154 2 - 4**	Nos.	13		
5.18.2	Providing & fixing set of narrow style dead lock dead lock for single/ double shutter door, with 25/ 35mm backseat, 20mm square for end with 72 mm centers including strike plate ss 304 in brass finish as per DIN 18251-1, grade 2 and prepared for euro profile cylinder (EPC) including strike plate and EPC length 60/70 mm standard Euro profile Pin Cylinder/ Half pin cylinder of approved make with both side key/ one side key one side knob/ slot operation with pair of Brass/ SS 304 Escutcheons (key hole plate) of approved for wooden doors with necessary SS Phillips head screws etc complete as per drawing and sample approved by engineer in charge. Rate shall be for all heights, all floors and all places. The lock shall be with 3 keys.	Set	13		
5.19.1	Providing & fixing SS 304 grade **push-pull pair of handle** made out of satin (brush) finish hollow pipe of 1.0mm thick having offset (C or D shape)/ H-shape/ D-shape of approved make with necessary screws etc. complete for wooden doors/ aluminium doors/ metal doors as per drawing as approved by Architect and Engineer-in-charge. Rate shall be for all heights, all floors and all places. The length of handle should be perfect center to center as below specified. **a) 600 mm long x 22 mm dia**	Set	13		
	Sub Total for 5.00				
	Section - 7.00 Plastering Works				
7.01b	Providing and laying average **10 mm thick single coat mala finish plaster** in CM 1:3, on ceilings and stair soffits at all floors, all shapes and all heights with necessary scaffolding, curing, making grooves, forming pattas, hacking properly RCC surface etc. complete as directed by the Architect and Engineer-in-charge. (for all civil, plumbing and electrical works)	Sqm	2,521		

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
7.03.b	Providing & laying average **18 mm thick mala finish cement plaster in two coats** on sides of masonry work / block wall / RCC wall at all heights, all shapes and all levels with **12 mm thick under coat in CM 1:4 (1 cement : 4 coarse sand) rough wired finish and 6 mm thick finishing coat in CM 1:3 (1 cement : 3 fine sand) mala finish (finished with steel trowel)** including scaffolding, finishing, curing, making grooves, forming pattas and drip mould, hacking RCC surface etc. complete, as directed by Engineer-In-charge.	Sqm	1,654		
7.04	Providing and laying average **18-20 mm. thick Sand face cement plaster** on walls up to any height above ground level and for all shapes consisting of average 12-15 mm. thick backing coat of CM 1:4 (1 cement: 4 coarse sand) and average 6 mm. thick uniform grained textured finish coat by using any means, in CM 1:2 (1 cement: 2 sand), including scaffolding, forming grooves, drip moulds, pattas, hacking RCC surface, curing etc. complete (for civil, plumbing & electrical works).	Sqm	1,080		
7.12	Providing and fixing G.I. hexagonal chicken mesh of size 20mm x 20mm of 22 gauge at junction of concrete and brick work or between different materials after making "V" grove between two different material surface and filled with rich cement mortar and @ 100mm on each side of Joint including necessary "U" nails/ screws/ washers with cleats for fixing, overlaps, scaffolding at all floors/ all levels/ all heights etc. complete as per specifications and direction of Engineer-in-charge. For civil, plumbing, electrical & infrastructure works.	Sqm	274		
	Sum Carried over to summary page				
	Section 8.00 Water proofing Works				
	Note: *All the waterproofing treatment shall be executed through a water- proofing agency approved by the manufacturer and/or Engineer In Charge. A written guarantee on non-judicial stamp paper shall be submitted by the main Contractor and his sub contractor who has carried out work for a minimum period of ten years from the certified date of completion for the satisfactory performance of the entire water-proofing system.*				
8.01.a	Providing and laying **conventional (India Type) cement based brickbat coba water proofing treatment** average 115mm thick and minimum thickness at khurra/ channel as 65 mm including preparation of surface as required for treatment on roofs, balconies, terraces etc. at all floors consisting of following operations and furnishing a guarantee bond in prescribe format of 10 years on Rs.100.00 stamp paper between main contractor, client and approved water proofing agency. 1) Cleaning and applying a cement slurry at the rate 2.75 Kg per sqm mixed with water proofing compound as manufacture's specification as directed by engineer-in-charge over the slab including adjoining walls up to 300mm height including testing the surface, grouting the cracks if leakage is found before the treatment . 2) Laying brick bats with mortar using broken bricks/ brick bats 25 mm to 115mm size with maximum 50% of cement mortar of mix 1:5 admixed with water proofing compound conforming to IS : 2645 in minimum 20 mm thick layer of beading cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls up to 300 mm height including rounding of junctions of walls and slabs. 3) After three days of proper curing applying a second coat of cement slurry at the rate 2.75 Kg per sqm admixed with water proofing compound conforming to IS : 2645 including laying glass fiber cloth of approved quality in top layer of plaster and finally Finishing the surface to make wired finish with average 12-20 mm thick joint less cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. 4) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge. (Only plan area shall be measured, vata shall not be measured separately and paid for.)	Sqm	1,529		
8.11	**Integral crystalline waterproofing system with barrier type coating** Providing and appling barrier type integral crystalline waterproofing treatment (surface coating) of Penetron, Kryton or equivalent to basement walls/ under ground water ratining structure etc. having speed of penetration 31 Cm in 56 days and resistance to 16 bar hydrostatic water head from negative side & capable of reducing permeability of concrete by more than 90 %, compared with control concrete. Rate shall be inclusive with damage and honey comb concrete, sealing any future hairline cracks because of its self healing nature as per manufacturer's specifications and as per technical specification etc complete. Work shall be carried out by approved applicator and as per method of waterproofing accepted by manufacturer. Work shall be guaranteed for 10 years against any leakages and guarantee shall be provided on Rs. 100/- stamp paper in approved proforma. Using PENETRON coating @ 0.7 Kg. per SqM per coat in two coats (within 15 to 20 days on wet concrete) or equivalent	Sqm	87		
8.09b	Providing and laying **65 mm. thick water proof cement concrete flooring for IPS** in 1:2:2 (1 Cement : 2 Sand : 2 Graded Aggregate 20mm nominal size) on RCC water tank Base, at all heights in line, level and gradient, including mixing water proofing materials of approved make, in cement concrete in proportion recommended by the manufacturer and finish smooth etc complete (for all civil, plumbing & electrical works).	Sqm	22		
	Sum Carried over to summary page				
	Section 9.00 Paving & Floor Finish Work				
9.01	Providing & laying broken china mosaic flooring for plain and curved surfaces, comprising of 12 to 20 mm. size broken pieces of glazed tiles (one or more colours, as directed) of Somany, Asian, Jonson or equivalent, laid over cement mortar 1:3 bedding including applying cement slurry at the rate of 2.75 kg per sqm on plain or sloped surfaces. The flooring/ dado shall be tampered with wooden rammer not exceeding 2 Kg in weight to bring the mortar up to the surface, including rounding of the junctions and extending them upto 15 cm. along the parapet wall. The rate shall include any type of bands, vata, any colour, any pattern or design as per drawing, curing, cleaning with water and oxalic acid etc. complete as sample approved by Architect/ EIC. (Only plan area shall be measured and paid). Rates should be inclusive of acid washing and vata.	Sqm	1,529		

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
9.04.a	Providing and laying vitrified floor tiles in 600mm x 600mm size (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours, shades, texture/ finish (matt/ anti skid/ satin/ polished/ glossy) in flooring and skirting, laid over a minimum 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) bedding on 40 mm wired finish screed 1:2:4 and laid to proper slope and level. Finishing to be done with flush pointing in white cement and approved pigment including curing and cleaning with mild oxalic acid etc. complete for all floor all height as directed by Architects and Engineer-in-charge. Rate shall be inclusive of protection of flooring until the handling of the project. **(Only flooring area should be measured and paid.)**	Sqm	87		
9.04.b	Providing and laying Vitrified tiles in 600mm x 600mm size (thickness to be specified by the manufacturer), with water absorption less than 0.08% and conforming to IS: 15622, of approved brand & manufacturer, in all colours, shade and texture/ finish (matt/ anti skid/ satin/ polished/ glossy), in wall tile/ dado, skirting, riser of steps, laid on masonry/ plaster/ RCC/ gypsum board with suitable cement based high polymer modified quick set tile adhesive (water based) conforming to IS: 15477, in average 6 mm thickness. Rate shall be inclusive of vitrified tile (as per approved sample), adhesive for fixing etc complete.	Sqm	462		
9.08.a	Providing material and labour for laying average **25mm thick machine cut polished Kota stone** slab of required size, approved quality, selected and sorted for uniform color & texture, **in flooring, otta, Sill, skirting** over 40mm (Average) thick base of cement mortar 1:5 (1-cement : 5-coarse sand) laid over and jointed with grey cement slurry mixed with pigment to match the shade of slab including curing, rubbing and polishing (semi mirror polish) at all floors any heights, any lead and lift in any shape and pattern etc complete as directed by Engineer In charge. Sample shall be approved before execution. Kota stone shall be in uniform shade of required size. Sample and mockup shall be approved before procurement of material.	Sqm	1,287		
9.12a	Providing material and labour for laying average 25 mm thick machine cut **polished kota stone** slab in single piece of required length for tread, riser, window jambs & sills, coping of approved quality, selected and sorted for uniform color & texture over 20 mm (average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand) laid over and jointed with gray cement slurry including pencil sharped exposed edges, polishing (semi mirror polish), rubbing, curing, finishing, buffing after final polishing, maintaining up to handling over the project etc complete as directed by engineer in charge. All Expose edges of stone shall be pencil sharped and in even thickness and polished at all floors any heights, any lead and lift etc complete. as directed by Engineer In charge. Sample and mockup shall be approved before procurement of material.	Sqm	21		
9.13.b	Providing material and labour for laying average 40**mm thick machine cut polished Kota stone** slab of required size, approved quality, selected and sorted for uniform color & texture, **in flooring, otta, Sill, skirting** over 40mm (Average) thick base of cement mortar 1:5 (1-cement : 5-coarse sand) laid over and jointed with grey cement slurry mixed with pigment to match the shade of slab including curing, rubbing and polishing (semi mirror polish) at all floors any heights, any lead and lift in any shape and pattern etc complete as directed by Engineer In charge. Sample shall be approved before execution. Kota stone shall be in uniform shade of required size. Sample and mockup shall be approved before procurement of material.	Sqm	110		
9.13	Providing roughened strip 2.5 cm wide to form antiskid surface on treads of stairs in any type of stone including forming straight deep curved gishi (groove), 6 mm wide & 4 mm deep on two sides of the roughened strip, etching/ blasting/ hammering/ chieseling between two groove, polishing the edges, sides and bottom of gishi etc. complete as per sample approved. Only one time length of tread of stair shall be measured for payment.	rmt	85		
9.46	Providing & laying sandwich platform comprising of a) Sandwich of 18 mm thick single side polish Granite of approved size, shade and sample on top and 30 mm thick polished kota in bottom with 25mm thick cement mortar (1:4) in between b) At centre vertical sandwich supports of 30 mm thick two kota stone on sides and 20mm CM (1:4) in between and at both end walls vertical supports of 18 mm thick double side granite. c) 75 mm raised platform at bottom with kota on top and 50mm CM (1:4) at bottom, kota stone skirting as per design and approved sample. The rate includes rounding, champhering and mirror polishing of edges, facias of granite, MS support including necessary bonding adhesive (if required). Rate shall be also inclusive of making holes & cutouts for SS sink, Oval wash basin, Piller tap / Bib tap etc. as directed by engineer in charge. (Only plan area shall be measured & paid for). Rate shall be included all kota & granite mentioned in above.	Sqm	28		
	Sum Carried over to summary page				
	Section 10.00 Iron & Steel Works				

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
10.01	Providing, fabricating, assembling, hoisting/ erecting and fixing in position at all heights/ all levels/ all floors/ all shapes & sizes with all leads & lifts using MS Rolled Steel Sections, Hollow/ Tubular sections, all type of sheet/ plate, Bright Bars, deep threaded MS bolts, threaded J bolts, insert plate, support plate etc as per drawing. all confirming to latest relevant IS codes for the work of steel structures like built-up section, staircases, railings, handrail, jali, gates, grills, bracings, grating, corner guard, platforms, brackets, monkey ladder, cattle trap, pipe rack, rungs, false ceiling frame work, Roof canopy, fencing posts, frame work for Screen/ facade etc. including straightening, cutting, bending, bolting and welding the members all as per structural drawings and as per detailed specifications (for materials & workmanship) including necessary scaffolding/ staging etc. complete in the situations described hereinafter and comprising of : i) Profile Cutting of components to required length/ width and shape/ profile; ii) Smooth grinding/ machining of edges/ faces/ all welding joints; iii) Necessary welding (electric arc welding) for required weld lengths and sizes. iv) Machine drilling of holes for joining/ anchoring. The rate shall include dry sanding, degreasing (wet cleaning) & preparation of rust free surface manually or mechanically, metal putty to make the surface even and smooth, 2 coat zinc chromate yellow oxide primer and 2 coat of enamel paint of approved shade of paint over all the surfaces of the steel sections or as specified in the drawing. (Standard measurements will be paid for as actual cut length used at site). Note: The contractor shall be submit fabrication drawings based on construction drawings (that may be issued during construction period) for approval by the Architect/ Engineer. The fabrication work shall start only after approval of the fabrication drawings submitted by contractor. Any change required in the fabrication drawings shall be carried out at No extra cost. Fabrication shall be in a perfect architectural workmanship manner and as provided in section V & VI of IS 800 & IS 7215. Rate shall be inclusive for the cost of anchor fastner, nut, bolt, accessories etc for fixing the elements.	kg	1,322		
	Sum Carried over to summary page				
	Section 11.00 Painting & polishing Works				
11.04	Providing & applying Weather Shield External Acrylic Paint of Apex Ultima of Asian or equivalent having VOC (Volatile Organic Compound) content less than 50 gm/ltr (minimum 2 coats) from following of desired shade (1 coat of exterior grade primer and 2 coats of paint) to give an even shade with brush on exterior sand faced plastered surfaces/ mala plastered surfaces/ textured surface or any other surfaces at all heights including scraping the existing painted surface (if required), thoroughly brushing the surfaces with sand paper to make it free from mortar dropping and other foreign matter, scaffolding etc. complete as per the manufacture's specification and up to the satisfaction of Engineer in charge. The rate shall also include the cost of filler for cracks on the surfaces.	Sqm	3,235		
11.08.b	**Paint and putty work on plastered surface** Providing and applying (Synthetic) **Plastic emulsion paint** (minimum 2 coats) having VOC (Volatile Organic Compound) content less than 50 gm/ltr on newly dry interior plastered surface including ceiling, roof etc.at all heights/ all levels/ all surfaces to give an even shade including applying required coats (min two coats) of white cement based putty after throughly brushing the surfaces free from mortar dropping and other foreign matter. Preparing the surface even and sand papered smooth, after applying every coat of putty complete. Priming coat of alkali resistant cement primer (water or solvent based) is to be applied over prepared smooth surface (undulation free) etc. complete as directed by engineer-in-charge. Sample to be approved before starting of the work by Architect/ EIC. The rate shall include the cost of filler for filling the cracks on surface, scraping the existing painted surface (if required), thoroughly brushing the surfaces with sand paper to make it free from mortar dropping and other foreign matter, scaffolding etc.	Sqm	1,654		
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Item nos.	Description of Work	Unit	Qty	Rate	Amount
	Section 16.00 Misc Items				
16.02	WPC board Ceiling with paint finish Providing and fixing 19mm thick Beige colour WPC board for paneling as pelmet with GI Gypsteel framing for ceiling of saint gobain as per drawing. Openable panel shall be made out of 19mm WPC board of approved make with necessary hardware i.e. hinge, magnet, etc. Exposed area of pelmet and openable shutter shall be sand papered and painted (min two coat) with of approved make and shade.	Sqm	87		
	Sum Carried over to summary page				
	Section 17 Demolition works				
17.01	Demolition including stacking of serviceable materials and disposal or unserviceable materials at nonobjectionable place with all leads and lifts including cutting the reinforcement, and finishing the broken surfaces to match with the surroundings etc. complete : **RCC Works.**	Cum	58		
17.02	Dismantling china mosaic & water proofing with all sub base etc. and as directed including taking the materials and disposal of unserviceable material at nonobjectionable place to all leads and lifts.	Sqm	1,529		
17.03	Demolition of brick work and stone masonry with or without plaster including stacking of serviceable materials and disposal of unserviceable materials at nonobjectionable place with all leads and lifts in lime mortar.	Cum	64		
17.04	Disconnecting, Shifting, Placing & reconnecting the existing ODU and other HVAC units to its working conditions to approved /said postion by Engineer-in-charge	LS	1		
17.05	Disconnecting, Shifting, Placing/stacking the existing Solar Panels to approved /said postion by Engineer-in-charge	LS	1		
17.06	Rebaring : Supplying, Drilling/ Cleaning hole and injecting Medium duty injection adhesive HY200 R for rebar fixing in Dry conditions. Drilling hole to the required depth by rotary hammer drill, cleaning with brush and jet of clean air, filling resin and hardener with standard dispenser into a hole of dia & depth as per manufacturer/ structural consultant's specification and fixing rebars of the required diameter subsequently and then fixing the re-bar. The system should be made of two foils consisting of resin and Hardener foil pack.The installation and the setting instructions should be strictly followed as per the manufacturer's specifications. Contractor shall submit the Rebar Depth Calculation based on design loads & other parameters as provided by consulatnt and in accordance with EOTA-TR-023/029 "guidelines for post installed rebar connections" for approval. Rate should be inclusive of all material, labour, necessary scaffolding etc complete for all height as directed by engineer in charge. (Pull out testing upto 1% of total rebar is to be produced by manufacturer). Steel will be paid under relevant item.				
17.06 a	Rebaring for diameter upto 10mm	nos	22		
17.06 b	Rebaring for diameter above 10mm	nos	55		
	Sum Carried over to summary page				
	Total Amount for Civil Works				
Plumbing works					
Section 1.0	**WATER SUPPLY**				
1.1	Providing and fixing **galvanised iron (GI) mild steel tube (Medium grade Class B)** of Tata make, conforming to IS: 1239, including tube fittings of R Brand such as sockets, unions, reducers, long or short bends, elbows, nipple, tees, etc., complete in proper line and level, including clamps, jointing with screw joints, using Teflon tape, conceal to wall**,** ceiling and floor including making them good the civil works, etc., complete of the following nominal bore (NB) size:				
	Internal Work - Concealed				
1.1.1	15mm dia pipes (21.8mm OD / 16.6mm ID)	RMT	22		
	Rate in Words:				
1.1.2	20mm dia pipes (27.3mm OD / 22.1mm ID)	RMT	13		
	Rate in Words:				
1.1.3	25mm dia pipes (34.2mm OD / 27.8mm ID)	RMT	11		
	Rate in Words:				
1.1.4	32mm dia pipes (42.9mm OD / 36.5mm ID)	RMT	11		
	Rate in Words:				
1.1.5	40mm dia pipes (48.8mm OD / 42.4mm ID)	RMT	11		
	Rate in Words:				
1.2	Making chases up to 7.5x7.5 cm in walls including making good and finishing with matching surface after housing G.I. pipe etc.	RMT	64		
	Internal Work - Concealed				
1.3	Providing and fixing **galvanised iron (GI) mild steel tube (Medium grade Class B)** of Tata make, conforming to IS: 1239, including tube fittings of R Brand such as sockets, unions, reducers, long or short bends, elbows, nipple, flanges, check-nuts, tees, etc., complete in proper line and level, including necessary supports viz., clamps, brackets, as specified, jointing with screw joints using Teflon tape, **open on wall and floor**, including testing the joints, and wrapping the pipes with insulation, etc., complete of the following nominal bore (NB) size: (Insulation as per Item. No. 1.4)				
	Internal Work - Exposed on wall (For Vertical Shafts) and Terrace level				
1.3.1	40mm dia pipes (48.8mm OD / 42.4mm ID)	RMT	6		
	Rate in Words:				
1.3.2	50mm dia pipes (60.8mm OD / 53.6mm ID)	RMT	56		
	Rate in Words:				
1.3.3	65mm dia pipes (76.6mm OD / 69.4mm ID)	RMT	75		
	Rate in Words:				

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
1.4	Providing & fixing of XLPE closed cell (Thermo plastic elastomeric) **insulation with Aluminium Foil cover,** of approved make**,** of the following diameter and thickness over exposed water pipes and fittings, of minimum 30 ± 3 kg / M³ density and haivng thermal conductivity 0.0382 W/MK or better at 26°C mean temperature, class 'O' insulation applied by suitable adhesive complete as per manufacturers specifications (for external water supply) all complete as per directions of the Engineer. Rate includes cost of all materials including fixing the insulation with the pipes with tapes or adhesives, labour charges for working at all levels, leads and heights.				
	Internal Work - Exposed on wall (For Vertical Shafts) and Terrace level				
1.4.1	For 40mm dia pipes - 6mm x 50mm XLPE Plain Tubing with ALUPET Foil	metre	7		
	Rate in Words:				
1.4.2	For 50mm dia pipes - 6mm x 54mm XLPE Plain Tubing with ALUPET Foil	metre	56		
	Rate in Words:				
1.4.3	For 65mm dia pipes - 6mm x 75mm XLPE Plain Tubing with ALUPET Foil	metre	75		
	Rate in Words:				
1.5	Providing & fixing **full way wheel operated bronze gate valve** (peg type) of conforming to BSEN 12288 (BS 5154), having screwed female ends conforming to IS 554, screwed in bonnet, inside screw, non-rising stem, integral seat, premium quality PTFE gland packing: Test Pressure (Hydrostatic): Shell: 25 kg/cm²g (350 psig), Seat: 16 kg/cm²g (225 psig), Maximum Working Temperature : 225°C, complete with Teflon sealant tape wound on the threaded joints, etc. and fixing to pipework as per the direction of the Engineer.				
	Make: Sant Cat. No.: IS 1 / Zoloto Art. No.: 1007 / Equivalent				
1.5.1	50 mm Nominal bore	each	3		
	Rate in Words:				
1.5.2	65 mm Nominal bore	each	4		
	Rate in Words:				
1.6	Providing, fixing,jointing, testing and commissioning of male/ female **screwed end full way lever operated forged brass ball valve** of brass body with forged brass hard chrome plated ball & teflon seat, PN 16 with (threaded joints) complete as required with all necessary accessories as per specification/drawings and as directed by Engineer In Charge. Location: Inside shafts, for isolation of Risers.				
	Make: Sant Cat. No.: IS 20 / Zoloto Art. No.: 1008B / Equivalent				
1.6.1	40 mm dia. Nominal bore	each	8		
	Rate in Words:				
1.6.2	50 mm Nominal bore	each	4		
	Rate in Words:				
1.7	Providing, fixing, testing and commissioning **Screwed End Forged Brass diaphragm / piston type pressure reducing valve** (maximum inlet pressure rating: 25 Bar, minimum outlet pressure: 1.5 Bar) with EPDM/Nitrile seat & 'O' Ring, pressure adjustable knob, external graduated scale for easy reading of set pressure, stainless steel filter cartridge, complete as per direction of the Engineer.				
	Make: Sant / Zoloto / Lehri / Equivalent				
1.7.1	40 mm dia. Nominal bore	each	3		
	Rate in Words:				
1.7.2	50 mm Nominal bore	each	2		
	Rate in Words:				
1.7.3	65 mm Nominal bore	each	1		
	Rate in Words:				
1.8	Providing, fixing, testing and commissioning of **Screwed End Gun Metal body Check (non-return) valve** of approved quality of the following sizes, complete as per direction of the Engineer.				
	Make: Sant / Zoloto / Equivalent				
1.8.1	65 mm Nominal bore	each	1		
	Rate in Words:				
	Sum Carried to Summary Page				
Section 2.0	**SANITARY INSTALLATIONS**				
2.10	**SANITARY - CERAMIC WARE & ACCESSORIES**				
2.1.1	Providing and Fixing white / ivory vitreous china rimless extended wall mount water closet (EWC) of **Hindware - Etios - Cat. No.: 20096**, as per IS: 2556 (Part 2) of minimum size 620 (long) x 355 (wide) x 700 (height) mm (P Type) including vitreous china **cistern (Cat. No: 21056)** with dual flush fittings, heavy duty seat and cover as per IS: 2548, chair bracket with 75 mm long, 6.5 mm. diameter counter sunk bolts and nuts embedded in the wall using rubber or fiber washers so as not to allow any lateral displacementof approved make and quality, and as approved by Engineer, including PVC Connector, all necessary fittings and accessories, complete as per specifications and as directed by the Engineer-in-charge.	each	7		
	Rate in Words:				
2.1.2	Providing and fixing White / Ivory Vitreous China Wall mount wash basin of **Hindware - Windsor - Cat. No.: 10036**, of size 460 x 360 mm with C.I. brackets, including painting of fittings and brackets, all junctions shall be sealed with silicon sealant. Rate shall include of 32 mm dia CP cast brass bottle trap of **Jaquar - Allied series Cat. No. 769L300x190** with extension piece to wall, wall flange with rubber adopter for waste connection and 32 mm dia CP brass waste full thread coupling of **Jaquar Make Allied series Cat No. 705L130**, as per specifications and as directed by the Engineer.	each	8		
	Rate in Words:				
2.1.3	Providing and fixing white vitreous china flat back urinal of **Hindware - Cat. No.: 60002 of size 376 x 390 x 590 mm** as approved by Consultants, comprising of: a) CP brass Pressmatic Urinal Flush Valve Auto-closing system with built in Control Cock and Wall flange, and 15mm S.S. pipe connection with urinal - **Cera - F9020203** b) CP Brass urinal spreader, 1 for each urinal - **Cera - F8070201** c) 32mm NB waste coupling of **Jaquar - Allied series Cat. No. ALD705** , 1 for each urinal d) 32mm bottle trap of **Jaquar - Allied series Cat. No. 769L250190,** and e) All necessary fittings & accessories as per specifications and directions of Engineer-in-charge	each	9		

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
	Rate in Words:				
2.1.4	Providing and fixing a vitreous chinaware Ivory colour Urinal partitions of **Hindware - Cat. No.: 61005** of size 750 x 165 x 365mm, including brass screws, silicon sealant, and all necessary materials required for fixing, complete as per directions of the Engineer-in-charge.	each	8		
	Rate in Words:				
2.20	**SANITARY - CP FAUCETS**				
2.2.1	Providing and fixing ABS Chrome plated Brass Hand Shower (Health Faucet) of **Jaquar - Allied series Cat. No. ALD573** and quality and as approved by Engineer - In - Charge, including 8 mm dia, 1 .2 Meter long Flexible tube & wall hook including cutting and making good the walls wherever required complete as per directions of the Engineer.	each	7		
	Rate in Words:				
2.2.2	Providing and fixing of 15mm nominal bore CP Brass Angle valve with wall flange of **Jaquar - Continental - Cat No.: CON-059KN,** confirming to IS: 8931, for wash basins, water coolers, etc of approved quality and as approved by and directed by the Engineer.	each	23		
	Rate in Words:				
2.2.3	Providing and fixing brass chromium plated heavy quality wash basin long neck pillar cock of **Jaquar - Continental - Cat No. CON-021KN**, including 450mm Long Braided Hose with M10X1 Nipple, 15mm Nut, O-Ring & Rubber Washer, connecting with the angle cock, all necessary materials required for fixing, complete as per directions of the Engineer-in-charge.	set	2		
	Rate in Words:				
2.2.3	Providing and Fixing in position CP brass Pressmatic Pillar cock of **Jaquar - Pressmatic series - PRS-031**, including 450mm Long Braided Hose with M10X1 Nipple, 15mm Nut, O-Ring & Rubber Washer, connecting with the angle cock, all necessary materials required for fixing, complete as per directions of the Engineer-in-charge.	set	6		
	Rate in Words:				
2.2.4	Providing and Fixing 15mm nominal bore (short body) C.P brass bib cock of **Jaquar - Continental - Cat. No.: CON-047KN** with wall flange complete, including cutting and making good the walls wherever required.	each	7		
	Rate in Words:				
2.30	**SANITARY - WASHROOM ACCESSORIES**				
2.3.1	Providing and fixing a screw-to-wall type **toilet paper-roll holder with flap,** fixed to the wall with CP brass screws, of **Jaquar - Continental - Cat. No.: ACN 1153S,** and all necessary materials required for fixing, complete as per directions of the Engineer-in-charge.	each	7		
	Rate in Words:				
2.3.2	Providing and fixing SS or brass chromium plated double Robe hook of **Jaquar - Continental - Cat. No.: ACN 1161N**, and all necessary materials required for fixing, complete as per directions of the Engineer-in-charge.	each	7		
	Rate in Words:				
2.3.3	Providing and fixing SS Towel Ring of **Jaquar - Continental - Cat. No.: ACN 1121BN**, with round wall flange, and all necessary materials required for fixing, complete as per directions of the Engineer-in-charge.	each	8		
	Make: Kich / Jaquar / Equivalent				
	Rate in Words:				
2.3.4	Providing and fixing Stainless Steel Grab bar , 600mm long of **Jaquar - Hotelier series - Cat. No. AHS-1507** fixed to the wall with CP brass screws, etc., complete to the satisfaction of Engineer-in-charge.	each	2		
	Make: Kich / Jaquar / Equivalent				
	Rate in Words:				
2.3.5	Providing and fixing Heavy class duty Stainless Steel of grade SS 304 floor drain cover with cockroach trap, of approved make and quality, weighing not less than 150 gms. including setting in floor with white cement to match with floor finish and as approved by and as per directions of Engineer-in-charge.				
2.3.5.1	101mm x 101mm Square Matt finish Stainless Steel Floor drain cover with Cockroach trap consisting of 100mm x 100mm perforated top cover, 67mm Ø x 56mm high Cockroach Trap ideal for 75mm drain pipe.	each	9		
	Make: Neer / Chilly / Equivalent				
	Rate in Words:				
2.3.5.2	137mm x 137mm Square Matt finish Stainless Steel Floor drain cover (For Urinal Drains) with Cockroach trap consisting of 100mm x 100mm solid top cover, 77mm Ø x 67mm high Cockraoch Trap ideal for 100mm drain pipe..	each	2		
	Make: Neer / Chilly / Equivalent				
	Rate in Words:				
	Sum Carried to Summary Page				

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
Section 3.0	**INTERNAL PLUMBING**				
3.1	Providing and fixing an SWR quality, heavy duty, **uPVC 'P' trap** as per IS: 14735 of Astral / Supreme / Ashirvad make, having a minimum water seal of 50 mm, as approved by EIC Including cutting the floor and making them good with surrounding M15 CC, masonry /block supports, MS brackets etc. testing, etc complete to the satisfaction of Engineer in charge, of he following size: (For All Drain Points)				
3.1.1	110 x 75 mm Dia	each	11		
	Rate in Words:				
3.2	Providing and fixing **6 kg/cm2 PVC non pressurized wastewater pipes** as per IS: 4985, of Astral / Supreme / Ashirvad make, solvent welding of pipes and fittings, fittings such as bends, elbows, tess etc., including chasing in the walls, fixing the pipes with clamps regular spacing, refilling the chased walls with Cement mortar 1:3 (1 - cement: 3 - fine sand) as directed by the Engineer. (For Kitchen Sinks, Urinals, and Wash Basins)				
3.2.1	40 mm dia pipe (40.0mm OD / 32.8mm ID)	metre	9		
	Rate in Words:				
3.2.2	50 mm Dia pipe (50.0mm OD / 42.6mm ID)	metre	7		
	Rate in Words:				
3.3	Providing, fixing, testing & commissioning of **Solvent Fit UPVC** non pressurized wastewater (SWR) pipes as per IS: 13592, of Astral / Supreme / Ashirvad make, including all fittings as per IS: 14735 such as bends, Y joints, reducers, swept tee, reducer Y joints, end caps, etc. and jonting the pipes and joints with solvent weld complete, including chasing in the walls, split pipe clamps with rubber lining, threaded rods, Hilti Make anchor fasteners, encasing the pipes with 100mm thick P.C.C. of 1:4:8 mix (1-cement; 4-coarse sand; 8-graded stone aggregate 20mm nominal size) in sunk slab portion only, complete and as directed by the Engineer. (For Internal Drainage)				
3.3.1	a) 75 mm dia pipe (75.0mm OD / 68.6mm ID)	metre	14		
	Rate in Words:				
3.3.2	b) 110 mm dia pipe (110.0mm OD / 103.6mm ID)	metre	87		
	Rate in Words:				
3.4	Providing and fixing UPVC non pressurized waste water fittings as per IS: 14735,of Astral / Supreme / Ashirvad make, with rubber insert of 3mm thickness complete, jointing the fittings and the pipes with manufacturer approved lubricant, complete and as directed by the Engineer. **110mm diameter Vent Cowl**.	each	8		
	Rate in Words:				
	Sum Carried to Summary Page				
Section 4.0	**RAIN WATER DISPOSAL**				
4.1	Providing and fixing on wall face and/or suspended on ceiling unplasticized-**PVC rain water pipes** and fittings including bends, tees, Y joints, Reducers, etc., conforming to IS : 4985,of Astral / Supreme / Ashirvad make, of 10 kg/sq. cm. including providing and fixing HILTI Make Anchor Fasteners, 8mm diameter G.I. Threaded rods, and clamps fixed at every 1.5 meters C/C, jointing the pipes and fittings with seal ring conforming to IS: 5382 leaving 10 mm gap for thermal expansion.				
4.1.1	110 mm dia pipe (110.0mm OD / 105.6mm ID)	metre	96		
	Rate in Words:				
	Sum Carried to Summary Page				
Section 5.0	**PLANT AND EQUIPMENT**				
5.1	**Hydro-pneumatic Systems for Domestic Water:** Supply, installation, testing & commissioning of Variable Speed highly efficient hydro-pneumatic pump system with in-line, vertical multistage, centrifugal clear water pumps with 304 casing, 304 impeller and SS-316 shaft, C.I. Base and head with CED coating. TEFC induction motor of Class 'F' insulation and efficiency class IE3 / IE5 magnetic motor (IE5 is preferable motor) with company fitted mechanical seal and company compliance certificate, operating on 1450 / 2900 RPM, suitable for operating on 415V ± 10%, 3 phase, 50 Hz, A.C. supply. Vendor to submit performance curves and technical catalogue with all GA Drawing of the proposed model for review and information. Panel mounted HMI based controller with large graphical display with VGA 240 x 320 pixels / MCCB Panel with IP55 rating and variable frequency drive (VFD) integrated in a Panel with pressure sensor transmitter, pressure switch, diodes to indicate pump ready, pump running and fault and capable to communicate with other controllers following MODBUS-RTU or BACNET Class-2 protocol through RS485 port. All alarms should be displayed in the controller. Cascading feature is must in system and System should be equipped with dry running protection. Pump curves should be inbuilt in the external controller/pump inbuilt PID controller. Indication of all type of faults / on-off status / electrical parameters shall be available on panel and central HMS	Set	1		
	1 Set = 3 Nos. Pump (2 Working + 1 Standby - cascade operation)				
	Capacity per pump - 15.0 m^3/hour				
	System Capacity - 30.0 m^3/hour				
	Head - 25 mtr				
	Pressure vessel PN10 rating- 100 liters or as per manufacturer recommendation with Justification.				
	Suction & Discharge Pipe Size: 65 mm nominal diameter				
	Approx. Elec. Load. - 2.2 kW / 3.0 HP each pump				
	Location - Terrace				
	Suction head - flooded positive suction				
	Rate in Words:				

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
5.2	**WATER COOLERS WITH INBUILT UV FILTERS:** Providing & erecting full brushed S.S. body (SS 304) water cooler with inbuilt UV Filters, having storage capacity 160 Ltrs. to 175 Ltrs. (Tank: SS 304), & cooling capacity 150 Ltr.per hour @ an ambient temp of 45˚C. The outlet temperature of the water should drop by 15˚C within a hour. The water cooler should be comprising of hermetically sealed reciprocating compressor with R314A cooling gas, fan motor, copper condensing unit, water tank surrounded by evaporating coil, thermostats, relay etc.complete with necessary inlet & outlet copper tubes and insulation, MS Channel Stand with two coats of anti-corrosion primer and two coats of sulphur black water-proof paint, with UV system of 50 LPH with G.I. Skid for mounting the UV lamp, and complete instrumentation. with DPELCB and 4 Way DB Box with accessories, 3 core wires for power connections, and earthing connection. **Make: Power H2O / Usha / Equivalent.**	Set	1		
	Rate in Words:				
5.3	**R.O. PLANT:** Supplying & erecting 5 stage single reverse osmosis water purification system of 50 LPH capacity, with M.S. powder coated frame, prefilter housing with 'O' ring, presediment filter, GAC filter, suitable booster DC pumps (2 nos.) of capacity 150 psi, with 40 psi inline type post carbon filter, auto low & high pressure switches, complete and erected as directed by Engineer-in-charge. **Make: Power H20 / Aquila / Aquaguard / Kent.**	Set	1		
	Rate in Words:				
	Sum Carried to Summary Page				
	Total Amount for Plumbing Works				
Electrical works					
1.00	**MV Switchgear**				
	Supplying, assembling, grouting, levelling, installation, Connecting , unloading at site, shifting to site, assembling, erecting, Testing, & Commissioning of L.T. panel board, fabricated from CRCA sheet & folded channel totally enclosed cubical type compartmentalized as per drawings.				
1.1	THIRD FLOOR HVAC ODU PANEL (OUTDOOR TYPE) as per single line diagram	No.	1		
	Sub Total 1.0.....				
2.00	**Distribution Board**				
	Supplying, assembling, grouting, levelling, installation, Connecting & testing D.B of specified make but without MCB /RCCB/RCBO/MCCB/ SPD etc. with all internal bus bar as per requirement.				
2.1	**VTPN Distribution Board :**				
2.1.1	Supplying, erecting, testing and commissioning of only VTPN D.B. with space for FP MCCB as incoming and space for 9 TPMCB & 9 SPMCB as outgoing per phase (i.e. 12 way VTPN D.B.) equivalent to Legrand cat no 607752.	No.	1		
2.2	**TPN Distribution Board :**				
2.2.1	Supplying, erecting, testing and commissioning of only TPN D.B. with space for FP MCB as incoming and space for DP RCCB and 14 SPMCB as outgoing per phase (i.e. 16 way TPN D.B.) eqequivalent to Legrand cat no 507674 with 16 way PPI kit cat no.507948	No.	3		
2.2.2	Supplying, erecting, testing and commissioning of only TPN D.B. with space for FP MCB as incoming and space for DP RCCB and 10 SPMCB as outgoing per phase (i.e. 12 way TPN D.B.) eqequivalent to Legrand cat no 507673 with 12 way PPI kit cat no.507947	No.	5		
2.2.3	Supplying, erecting, testing and commissioning of only TPN D.B. with space for FP MCB as incoming and space for DP RCCB and 6 SPMCB as outgoing per phase (i.e. 8 way TPN D.B.) eqequivalent to Legrand cat no 507672 with 8 way PPI kit cat no.507946	No.	1		
2.3	**SPN Distribution Board**				
2.3.1	Supplying, erecting, testing and commissioning of SPN D.B. with space for DP RCCB as incoming and 12 SPMCB as outgoing per phase (i.e. 16 way SPN D.B.) equivalent to Legrand cat no. 607713	No.	3		
2.3.2	Supplying, erecting, testing and commissioning of SPN D.B. with space for DP RCCB as incoming and 8 SPMCB as outgoing per phase (i.e. 12 way SPN D.B.) equivalent to Legrand cat no. 607712	No.	2		
.2.3.3	Supplying, erecting, testing and commissioning of SPN D.B. suitable for outdoor mounting IP 65 with space for DP MCB as incoming and 2 SPMCB as outgoing (i.e. 4 way SPN D.B.) equivalent to Hensel make cat no. KV 7104	No.	1		
2.4	**MCB 's and its Accessories**				
	Supplying, Assembling, levelling, connecting & testing following MCB / ELMCB / Isolators etc in boards as specified in 7.1, 7.2 & 7.3				
2.4.1	6 to 32 A SP MCB	No.	220		
2.4.2	6 to 32 A DP MCB	No.	5		
2.4.3	40 A DP Isolator	No.	2		
2.4.4	40/63 A FP Isolator	No.	2		
2.4.5	16 - 25 A DP RCBO (30mA)	No.	1		
2.4.6	16 - 25 A DP RCBO (100mA)	No.	4		
2.4.7	32 A DP RCBO (30mA)	No.	10		
2.4.8	32 A DP RCBO (100mA)	No.	2		
2.4.9	40 A DP RCBO (30mA)	No.	10		
2.4.10	40 A DP RCBO (100mA)	No.	2		
2.4.11	63 A DP RCBO (30mA)	No.	2		
2.4.12	63 A DP RCBO (100mA)	No.	1		
2.4.13	63 A FP RCBO (100mA)	No.	1		
2.4.14	16 - 32 A TP MCB	No.	1		
2.4.15	40 A TP MCB	No.	1		
2.4.16	63 A TP MCB	No.	1		
2.4.17	16 - 32 A FP MCB	No.	4		
2.4.18	40 A FP MCB	No.	9		
2.4.19	63 A FP MCB	No.	6		
2.4.20	Sheet steel metal enclouser for SP MCB cat no.607881	No.	1		

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2.4.21	Sheet steel metal enclouser for DP MCB cat no.607882	No.	1		
2.4.22	Sheet steel metal enclouser for FP MCB cat no.607884	No.	10		
.2.4.23	Blank Plates	No.	10		
2.5	**Surge Protection Devices (SPD)**				
	Supplying, Assembling, levelling, connecting & testing following VSPs etc in boards as specified in 7.1, 7.2 & 7.3				
2.5.1	1.2KV Protection level FP, Class 's', (Imax-15KA, 8/20µS) L&T Cat no. LPDA2015P4 or Equivalent	No.	2		
2.5.2	1.2KV Protection level DP, Class 's', (Imax-15KA, 8/20µS) L&T Cat no. LPDA2015P2 or Equivalent	No.	2		
2.6	**MCCBs & Isolaters :**				
	Supplying, Assembling, levelling, connecting & testing following MCCB etc in boards as specified in 7.1, 7.2 & 7.3				
2.6.1	100 A FP MCCB not less than 10 KA	No.	1		
2.6.2	M.S. powder coated enclosure suitable for 100A FP MCCB.	No.	1		
2.7	**Caution Board :**				
2.7.1	Caution boards of size 150 x 150 mm. to be supplied & fixed on the D.B.	No.	3		
2.7.2	Caution boards of size 100 x 100 mm. to be supplied & fixed on the D.B.	No.	1		
	Sub Total 2.0.....				
3.00	**Cable Trench**				
3.1	Excavation and back filling of cable trenches required for laying the cables directly buried in the ground. This includes supplying and providing cable markers at an interval of 10 meters. The depth and the width shall be as per requirement.	Cu. Mtr			
3.2	Supplying and spreading fine sand for a thickness of 100 mm. and providing and laying bricks for protection on cable on all the three sides.	RMt			
	Sub Total 3.0.....				
4.00	**MV Cabling**				
4.1	Supply, testing and Laying XLPE steel/GI wire/flat armoured cable of 1100 V grade of Aluminum / Copper Conductor of following sizes in ready made trench or mounted on wall with necessary clamping arrangement or in pre-laid RCC hume pipe with necessary cable identification mark to be provided at distance of 25 mt. The vertical cable on wall shall be drawn in prelaid conduit for vertical mechanical support.				
	Aluminum Cables				
4.1.1	300 sq.mm x 1 c Al. cable	Mtr			
4.1.2	400 sq.mm x 3.5 c Al. cable	Mtr			
4.1.3	300 sq.mm x 3.5 c Al. cable	Mtr			
4.1.4	240 sq.mm x 3.5 c Al. cable	Mtr			
4.1.5	185 sq.mm x 3.5 c Al. cable	Mtr			
4.1.6	150 sq.mm x 3.5 c Al. cable	Mtr			
4.1.7	120 sq.mm x 3.5 c Al. cable	Mtr			
4.1.8	95 sq.mm x 3.5 c Al. cable	Mtr			
4.1.9	70 sq.mm x 3.5 c Al. cable	Mtr	457		
4.1.10	50 sq.mm x 3.5 c Al. cable	Mtr	83		
4.1.11	25 sq.mm x 3.5 c Al. cable	Mtr	149		
	Copper Cables				
4.1.12	16 sq.mm x 4 c Cu. cable	Mtr	17		
4.1.13	10 sq.mm x 4 c Cu. cable	Mtr	413		
4.1.14	6 sq.mm x 4 c Cu. cable	Mtr			
4.1.15	4 sq.mm x 4 c Cu. cable	Mtr			
4.1.11	2.5 sq.mm x 4 c Cu. cable	Mtr			
4.1.12	16 sq.mm x 3 c Cu. cable	Mtr			
4.1.16	10 sq.mm x 3 c Cu. cable	Mtr			
4.1.17	4 sq.mm x 3 c Cu. cable	Mtr			
4.1.18	2.5 sq.mm x 3 c Cu. cable	Mtr			
4.1.19	**HEAT / FIRE RESISTANT COATING OF CABLE**				
	Supply and application of intumescent based coating on cables/ cable tray using CP 678 firestop cable coating of HILTI make or equivalent .The coating shall have a density in the range of 1.2 to 1.4 Kg/ L. The coating shall be non-toxic, asbestos and halogen free and shall have good mechanical strength. The coating shall comply with IEC 332 part 3 (1992).	Sq.Mtr	2		
	Sub Total 4.0.....				
5.00	**Cable Termination**				
5.1	Supplying & fixing double compression type Brass glands (single compression for indoor application and double compression for outdoor applications) & making joint with necessary bi metallic crimping socket of long nack type connecting the same to various equipment/panel/DB etc. for the following sizes:				
	Aluminum Cables				
5.1.1	300 sq.mm x 1 c Al. cable	no			
5.1.2	400 sq.mm x 3.5 c Al.	no			
5.1.3	300 sq.mm x 3.5 c Al.	no			
5.1.4	240 sq.mm x 3.5 c Al.	no			
5.1.5	185 sq.mm x 3.5 c Al.	no			
5.1.6	150 sq.mm x 3.5 c Al.	no			
5.1.7	120 sq.mm x 3.5 c Al.	no			
5.1.8	95 sq.mm x 3.5 c Al.	no			
5.1.9	70 sq.mm x 3.5 c Al.	no	10		
5.1.10	50 sq.mm x 3.5 c Al.	no	2		
5.1.11	25 sq.mm x 3.5 c Al.	no	4		
	Copper Cables				
5.1.12	16 sq.mm x 4 c Cu. cable	no	2		

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
5.1.13	10 sq.mm x 4 c Cu. cable	no	12		
5.1.14	6 sq.mm x 4 c Cu. cable	no			
5.1.15	4 sq.mm x 4 c Cu. cable	no			
5.1.11	2.5 sq.mm x 4 c Cu. cable	no			
5.1.12	16 sq.mm x 3 c Cu. cable	no			
5.1.16	10 sq.mm x 3 c Cu. cable	no			
5.1.17	4 sq.mm x 3 c Cu. cable	no			
5.1.18	2.5 sq.mm x 3 c Cu. cable	no			
	Sub Total 5.0.....				
6.00	**Cable Tray**				
6.1	Supply & Installation of hot dip GI ladder type cable tray with all accessories like coupler, GI nut bolts, bend, tee, reducer etc as per specification and drawings complete with all required hardware :				
6.1.1	150 x 50 made out of 2 mm thick	Mtr	28		
6.1.2	300 x 100 made out of 2 mm thick	Mtr	28		
6.1.3	450 x 100 made out of 2 mm thick	Mtr	6		
6.1.4	600 x 100 made out of 2 mm thick	Mtr	6		
6.2	Supply & Installation of hot dip GI Perforated type cable tray with all accessories like coupler, GI nut bolts, bend, tee, reducer etc as per specification and drawings complete with all required hardware :				
6.2.1	150 x 50 made out of 2 mm thick	Mtr	11		
6.2.2	300 x 100 made out of 2 mm thick	Mtr	6		
6.2.3	600 x 100 made out of 2 mm thick	Mtr	6		
6.3	Supplying , fabricating and installation of various sizes clamps for cable tray supports using available M.S. sections & rod as per drawings or instructions of engineer in charge or consultant including applying zinc chromate yellow oxide and two to three coats of required enamel paints with anchor fasteners etc.	Kg	165		
6.4	Supplying , fabricating and installation of various sizes junction boxes made out to 14 gauge sheet with all necessary accessories & hardware etc All the necessary fabrication required will be included in the scope of contractor. Scope also includes two coat of primer and two coat of paining of each items on all the sides complete in all respect.	Kg	28		
	Sub Total 6.0.....				
7.00	**Internal Wiring**				
7.1	Wiring of points to be done in open/concealed manner in 25 mm dia medium gauge Rigid PVC FRLS pipe. Wiring shall be done with FRLS type copper flexible wire of 650V/1100V. Separate pipe should be taken for circuit mains. Nos of ciruit of the same phases may be taken in same conduit (maximum 2 ckts).The circuit shall be laid in 25/40 mm dia medium gauge rigid PVC FRLS pipe. The point rate shall include all the necessary piping and wiring from sub panel / Distribution board to switch board & switch board to the batten holder / angle holder / connector / ceiling rose all inclusive except sub panel / Dist board.				
	The wiring shall be done as per relevant prevailing standard. The looping of the wiring should be done in the switch boxes or light and fan point outlet boxes to avoid the junction boxes. The junction boxes and switch boxes for the ceiling light point, fan point etc shall be minimum 60/75 deep. All the necessary jarry in brick plastered walls should be done with machine cutter only , also jarry should be filled with cement, sand and wire mesh as required, the material cost for rough finish shall be included in point rate. Whenever pipes are required to be laid in flooring shall be of heavy guage.Wiring should be done as per distribtion details. Each circuit should have dedicated phase, neutral & earth wire. Wire sizes to be used as under				
	For Light Points /fan point/ wall fan / 6A 3 Pin Plug				
	- DB to SB - 2.5sqmm for Phase & Neutral & 1.5 sqmm for Earth				
	- SB to Point - 1.5 sqmm for Phase & Neutral & Earth				
	For 6A plug point				
	- 1.5 sqmm for Phase, Neutral & Earth				
	For 6/10/16A general purpose plug point				
	- 2.5 sqmm for Phase, Neutral & 1.5 sq. mm Earth				
	For 16A plug point for A/C and Geyser				
	- 4 sqmm for Phase, Neutral & 2.5 sq. mm Earth				
	For 20/32A plug point				
	- 6 sqmm for Phases, Neutral & 4 sq. mm Earth				
	No zarry will be allowed in expose brick work. The conduit shall be provided when the walls are under construction. The pipes in slab shall be laid before the slab is casted.				
7.1.1	One light point controlled by one single way 6 A switch.	No.	103		
7.1.2	One light point controlled by one SP MCB rate of light point does not include cost of MCB.	No.			
7.1.3	Loop light point controlled by same switch or SP MCB same as 12.1.1. & 12.1.2.	No.	110		
7.1.4	One light point controlled by two, two way 6 A switch	No.	5		
7.1.5	One ceiling fan outlet point controlled by one 6 A switch and hum free electronic type step regulator.	No.	44		
7.1.6	One 6 A x 5 pin 250 Volt socket outlet point controlled by one 6 A switch located on switch board.	No.	34		
7.1.7	6 A x 5 pin 250 Volt switched socket outlet point at convenient location. (General Purpose Plug Point & Laptop Plug Point on Desk)	No.	299		
7.1.8	6/16 A x 250 V switch socket point on one switch box for AV VRV IDU's, Laptops, Fridge, Oven, Tea-coffee Machine etc with 2.5 sqmm flexible wires and phase and neutral and 1.5 sq nm flexible Cu. wire as earth wire. The rate should include conduiting Upto DB.	No.	26		
7.1.9	6/16A x 250 Volt switched socket outlet point for A.C./Geyser with 4 sq.mm wire for phase and neutral & 2.5 sq.mm earth wire.	No.	1		
7.1.9 a	6/16A x 250 Volt switched socket outlet point for outside with 4 sq.mm wire for phase and neutral & 2.5 sq.mm earth wire.(outdoor type)	No.	1		
7.1.10	-Do- as above but switch and socket at different location.	No.	2		
7.1.11	Exhaust fan outlet point with 6A 5 pin socket controlled by one 5 single way switch located at different location.	No.	2		
7.1.12	10A x 250V Metal clad socket outlet point with 10 Amp. SPMCB.	No.	1		

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
7.1.13	20 A x 250 Volt metal clad socket outlet point with 20 Amp. SPMCB.	No.	1		
7.1.14	32 A 5 pin x 415 Volt (3 Phase) Metal clad socket outlet point with 32 Amp. FPMCB.	No.	1		
7.1.15	16 A x 250 V plug & socket with interlocked switched socket, DP MCB and surface mounting box IP 66 with DIN rail for 2 module equivalent to legrand make Cat no.56661 but without cost of wiring and piping.	No.			
7.1.16	32 A x 250 V plug & socket with interlocked switched socket, DP MCB and surface mounting box IP 66 with DIN rail for 5 module equivalent to legrand make Cat no.56669 but without cost of wiring and piping.	No.			
7.1.17	32 A x 415 V plug & socket with interlocked switched socket, FP MCB and surface mounting box IP 66 with DIN rail for 5 module equivalent to legrand make Cat no.56674 but without cost of wiring and piping.	No.			
7.1.18	Buzzer point controlled by Bell push with modular type buzzer same make as switch	No.	2		
7.1.19	Bell point controlled by Bell push switch with bell of approved make.	No.	2		
7.1.20	SITC computer power supply point with 3 nos of 6 amp 5 pin plugs with 1 no 16 A Switch with indicator & wiring of computer point.	No.	1		
7.1.21	SITC computer power supply point with 2 nos of 6 amp 5 pin plugs with 1 no. of 16 Amp. Plug with 1 no 16 A Switch with indicator & wiring of computer point.	No.	28		
7.2	**MAINS :**				
	The mains is considered from the meter/sub panel to the individual distribution boards.				
7.2.1	Supplying and Laying mains with 4 nos. of 25 sq mm Cu. PVC insulated flexible wire with ISI and FIA approval for 650 V/ 1100 V and 2 nos 10 sqmm Cu. PVC insulated flexible wires with ISI approval for 650 V/ 1100 V as earth wires to be drawn in 40 mm diameter rigid PVC conduit of medium gauge having ISI and FIA approval with all necessary accessories.	RMt	11		
7.2.2	Supplying and Laying mains with 4 nos. of 16 sq mm Cu. PVC insulated flexible wire with ISI and FIA approval for 650 V/ 1100 V and 2 nos 6 sqmm Cu. PVC insulated flexible wires with ISI approval for 650 V/ 1100 V as earth wires to be drawn in 40 mm diameter rigid PVC conduit of medium gauge having ISI and FIA approval with all necessary accessories.	RMt	11		
7.2.3	Supplying and Providing mains with 4 nos. of 10 sq mm Cu. PVC insulated flexible wire with ISI and FIA approval for 650 V/ 1100 V and 2 nos 4 sqmm Cu. PVC insulated flexible wires with ISI approval for 650 V/ 1100 V as earth wires to be drawn in 40 mm diameter rigid PVC conduit of medium gauge having ISI and FIA approval with all necessary accessories.	RMt	55		
7.2.4	Supplying and Providing mains with 4 nos. of 6 sq mm Cu. PVC insulated flexible wire with ISI and FIA approval for 650 V/ 1100 V and 2 nos 2.5 sqmm Cu. PVC insulated flexible wires with ISI approval for 650 V/ 1100 V as earth wires to be drawn in 40 mm diameter rigid PVC conduit of medium gauge having ISI and FIA approval with all necessary accessories.	RMt	358		
7.2.5	Supplying and Laying mains with 2 nos. of 10 sq mm Cu. PVC insulated flexible wire with ISI and FIA approval for 650 V/ 1100 V and 1 no 6.0 sqmm Cu. PVC insulated flexible wires with ISI approval for 650 V/ 1100 V as earth wires to be drawn in 25 mm diameter rigid PVC conduit of medium gauge having ISI amd FIA approval with all necessary accessories.	RMt	11		
7.2.6	Supplying and Providing mains with 2 nos. of 6 sq mm Cu. PVC insulated flexible wire with ISI and FIA approval for 650 V/ 1100 V and 1 nos 4.0 sqmm Cu. PVC insulated flexible wires with ISI approval for 650 V/ 1100 V as earth wires to be drawn in 25 mm diameter rigid PVC conduit of medium gauge having ISI and FIA approval with all necessary accessories.	RMt	358		
7.2.7	Supplying and Providing mains with 3 nos. of 4 sq mm Cu. PVC insulated flexible wire with ISI and FIA approval for 650 V/ 1100 V and be drawn in 25 mm diameter rigid PVC conduit of medium gauge having ISI and FIA approval with all necessary accessories.	RMt	11		
7.2.8	Supplying and Providing mains with 3 nos. of 2.5 sq mm Cu. PVC insulated flexible wire with ISI and FIA approval for 650 V/ 1100 V and be drawn in 25 mm diameter rigid PVC conduit of medium gauge having ISI and FIA approval with all necessary accessories.	RMt	11		
7.2.9	Supplying and Providing mains with 3 nos. of 1.5 sq mm Cu. PVC insulated flexible wire with ISI and FIA approval for 650 V/ 1100 V and be drawn in 25 mm diameter rigid PVC conduit of medium gauge having ISI and FIA approval with all necessary accessories.	RMt	55		
7.3	**Race way**				
7.3.1	Supply and installation of 3 compartment 225 mm x 38 mm under floor metal trucking/race way with all accessories made out of hot dip pre galvanized metal coated steel sheet equivalent to MK Ega (novar) make.	RMt	110		
7.3.2	Supply and installation of 1 compartment 100 mm x 38 mm under floor metal trunking/race way with all accessories made out of hot dip pre galvanized metal coated steel sheet equivalent to MK Ega (Novar) make.	RMt	28		
7.3.3	Supply and installation of 3 compartment Access outlet / service box of 250 x 250 x 60-75 mm with all accessories made out of high pressure die cast material suitable for above race ways equivalent to MK Ega (Novar) make.	Nos.	39		
7.3.4	Supply and installation of 3 compartment 100 mm x 50 mm wall trunking/race way with cover and all accessories made out of PVC equivalent to MK (premier) make.	RMt	110		
	Sub Total 7.0.....				
8.00	**Light Fixtures & Fans**				
8.1	Supplying, erecting, connecting, testing and commissioning of Following type Light Fixture with all necessary Hardware, Internal Wiring with Lamp, Ballast etc. all required accessories Complete in all respect. Cost includes wiring from outlet point to light fixtures and also wiring from first light fixtures to second light fixtures wherever provided on back to back (touching each other) arrangements.				
8.1.1	Any kind of light fixture Type - A with lamp with basic rate of Rs 3000/- (up to 4500)	No.	41		
8.1.2	Any kind of light fixture Type - B with lamp with basic rate of Rs 6000/- (Above 4500 & up to 8000)	No.	64		
8.1.3	Any kind of light fixture Type - C with lamp with basic rate of Rs 10000/- (Above 8000)	No.	110		
8.2	Supply, Installation, testing and commissioning following sizes ceiling Fans without fan regulator.				
8.2.1	36/42" Dia Sweep Ceiling Fan with Fan Hook as per approved color & equivalent to Crompton make high speed type...	No.	2		
8.2.2	48" Dia Sweep Ceiling Fan with Fan Hook as per approved color & equivalent to Crompton make high speed type...	No.	40		

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
8.2.3	56" Dia Sweep Ceiling Fan with Fan Hook as per approved color & equivalent to Crompton make high speed type...	No.	2		
8.2.4	Additional fan rod made out of 10 gauge GI pipe with all necessary painted and required accessories for fan suspension.	No.	44		
8.3	Supply, Installation, testing and commissioning of following sizes Exhaust Fans of approved make				
8.3.1	Light duty 225/305 mm. diameter propeller exhaust fans single phase 1400 RPM.	No.	1		
8.3.2	Heavy duty 305 mm. diameter propeller exhaust fans single phase 1400 RPM.	No.	1		
8.3.3	Heavy duty 450 mm. diameter propeller exhaust fans single phase 1400 RPM. With M.S. louver shutter of the exhaust fan	No.	2		
	Sub Total 8.0.....				
9.00	**Earthing**				
9.1	Providing earthing stations for equipment earthing as shown and specified in drawing for equipment complete with :				
9.1.1	3Mtr long Copper Bonded Earth Rod 10' x 5/8" made from high tensile low carbon steel and each rod should molecularly bonding 99.9% + 30Kg GRESLO Earthing. MAP pure electrolytic copper to the low carbon steel core in accordance with national and international standards such as BS6651, BS7430 and UL467. MAP's Resistance Lowering Compound (GRESLO-30Kg) comprises specifically selected compounds, which possess excellent electrical conductivity. Equivalent to Model: MAP 3Mtr CBR+ 30 Kg GRESLO.	No.			
9.1.2	3Mtr long Copper Bonded Earth Rod 10' x 5/8" made from high tensile low carbon steel and each rod should molecularly bonding 99.9% + 30Kg RESLO Earthing. LPI pure electrolytic copper to the low carbon steel core in accordance with national and international standards such as BS6651, BS7430 and UL467. LPI's Resistance Lowering Compound (RESLO-20Kg) comprises specifically selected compounds, which possess excellent electrical conductivity. Equivalent to Model: LPI 3Mtr CBR+ 20 Kg RESLO.	No.	3		
9.2	Earth wire/strips :				
	Supply and laying cu. earthing required size strips for interconnecting the earthing stations, panels, DB's etc. in built up trenches, on walls/ceiling, buried in ground generally as specified and shown on drawings complete with :				
	a) Fixing accessories.				
	b) Corrosion protection of buried conductors with bituminous coating and covered with PVC tapes.				
9.2.1	25 x 3 mm cu. Strip	RMt	385		
9.2.2	32 x 3 mm cu. Strip	RMt	11		
.9.2.3	50 x 6 mm cu. Strip	RMt	11		
.9.2.4	50 x 6 mm GI. Strip	RMt	55		
.9.2.5	No.8 gauge bare GI. earth wire	RMt	198		
.9.2.3	Earth Link : 38mm x 6 mm 1ft Long Cu.earth link fixed by necessary screws on wall.	No.	2		
	Sub Total 9.0.....				
10.00	**Miscellaneous**				
10.1	**PVC PIPES**				
	Supplying and laying following sizes PVC pipe of approved make in open / recess manner including execavation and back filling (if required) as per layout and drawing and re-filling the trenches etc. complete as directed.				
10.1.1	Medium gauge (LMS) pipe in Open / Concealed manner minimum 25 mm dia with GI pulling wire.	Rmtr	55		
10.1.2	Heavy gauge pipe (HMS) in Open / Concealed manner minimum 25 mm dia with GI pulling wire.	Rmtr	110		
10.1.3	Heavy gauge pipe in Open / Concealed manner minimum 32 mm dia with GI pulling wire.	Rmtr	165		
10.1.4	Heavy gauge pipe in Open / Concealed manner minimum 40 mm dia with GI pulling wire.	Rmtr	55		
10.1.5	Heavy gauge pipe in Open / Concealed manner minimum 50 mm dia.	Rmtr	11		
10.1.6	Heavy gauge pipe in Open / Concealed manner minimum 75 mm dia.	Rmtr	11		
10.1.7	Heavy gauge pipe in Open / Concealed manner minimum 100 mm dia.	Rmtr	6		
10.1.8	Heavy gauge pipe in Open / Concealed manner minimum 150 mm dia.	Rmtr	6		
10.1.9	Extra over rate for Supply & laying of 25 mm dia. heavy guage rigid PVC pipe in Open/conceal manner instead of Medium Guage Pipe. This will apply wherever conduits to be laid insterad of medium guage pipe specified in the 7.0 (internal witring)	Rmtr	11		
10.1.10	Extra over rate for Supply & laying of 32 mm dia. heavy guage rigid PVC pipe in Open/conceal manner instead of Medium Guage Pipe.	Rmtr	11		
10.1.11	Extra over rate for Supply & laying of 40 mm dia. heavy guage rigid PVC pipe in Open/conceal manner instead of Medium Guage Pipe.	Rmtr	11		
10.1.12	Supplying & Erecting Rubber mat 1.1 KV grade ISI marked 1000 x 2000 x 6 mm size.	No.			
10.2	**Fire Stopper**				
10.2.1	Equivalent to Hilti make Hilti Mineral Wool Board System Providing Fire resistant board system with minimum 2 hours fire rating when tested in accordance with BS 476 part 20 for horizontal openings in fire rated floors or slabs and vertical openings in walls for passing service shafts. The fire resistant board system shall comprise of a mineral wool board coated with an ablative coating CP 670 at 0.7mm dft. The mineral wool board should be of min.160 kg/m3 density. All contact surfaces and cavities shall be sealed with a joint filler CP 606. The service lines could be of various types like electrical cables trays, metal pipes, etc. The product shall be age tested for as per Dafstb and DIBT standards. The product should be tested for mold resistance rating of 0 as determined by ASTM G21-96 and should have a VOC content of approx. 38 g/l as per LEED 2009. The product shall bear the UL and FM approval logo on the packing where applicable.	SQM	3		

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Item nos.	Description of Work	Unit	Qty	Rate	Amount
10.2.2	Equivalent to Hilti make CP 636 Firestop Mortar Providing & fixing Fire Barrier mortar with minimum 2 hours fire rating when tested in accordance with BS 476 part 20 and UL 1479 for horizontal openings in fire rated floors or slabs and vertical openings in walls for passing service shafts. The service lines could be of various types like electrical cables trays, metal pipes, GI Ducts for AC, etc. The product shall be age tested as per Dafstb and DIBT standards. The product should be tested for mold resistance rating of 0 as determined by ASTM G21-96. The product shall be tested and approved by third party agencies such as UL and FM. The mortar should be tested in accordance with IEC 60068-2-57:1999-11 (Environmental Testing) as per Part 2-57: Test for Vibration-Time-history method and VERTEQII for seismic zone 4. The product shall bear the UL and FM approval logo on the packing where applicable.	SQM	2		
10.2.3	Equivalent to Hilti make CP 620 Expanding Seal Providing Fire expanding foam with minimum 2 hours fire rating when tested in accordance with BS 476 part 20 and UL 1479 for horizontal openings in fire rated floors or slabs and vertical openings in walls made of concrete/ masonry or Gypsum for passing service shafts. The expanding foam expands seven times its volume to fill the cavity at the time of dispensing the material and shall fully cure within two minutes after dispensing. The product shall be age tested as per Dafstb and DIBT standards. The product shall provide water tightness when tested for W rating as per UL standards and shall be tested for providing a sound insualtion of 50 db when tested in accordance with ASTM E 90. The product should be tested for mold resistance rating of 0 as determined by ASTM G21-96 and should have a VOC content of approx. 1.3 g/l as per LEED 2009. The product shall be tested and approved by third party agencies such as UL & FM. The product should be tested in accordance with IEC 60068-2-57:1999-11 (Environmental Testing) as per Part 2-57: Test for Vibration-Time-history method and VERTEQII for seismic zone 4. The product shall bear the UL and FM approval logo on the packing where applicable.	Nos.	4		
.10.2.3	Equivalent to Hilti make CP 678 Cable coating Provide and apply intumescent based coating on cables/ cable tray along the horizontal runs at every 10 mtr in case of horizontal runs, every 5m in case of vertical runs and tee-offs shall be provided at intervals of 30mtr. The coating shall have a density in the range of 1.2 to 1.4 Kg/ L. The coating shall be non-toxic, asbestos and halogen free and shall have good mechanical strength. The coating shall comply with IEC 332 part 3 (1992). The product should be tested for mold resistance rating of 0 as determined by ASTM G21-96 and should have a VOC content of approx. 60 g/l as per LEED 2009. The coating should not have any de-rating effect on the cable and should support relevant certificates for these attributes.	SQM	6		
	Sub Total 10.0.....				
11.00	**ELV Service Works**				
11.1	Heavy gauge pipe (HMS) in Open / Concealed manner minimum 25 mm dia with GI pulling wire.	Rmtr	825		
11.2	Medium gauge (LMS) pipe in Open / Concealed manner minimum 25 mm dia with GI pulling wire.	Rmtr	2,530		
11.3	Supply and laying 4 pair CAT6 Unshielded Twisted Pair (U/UTP) Cable, 23 AWG LSZH type, Meets or exceeds ANSI/TIA-568-C.2 , and with UL Listed & RoHS Compliant ts should be available. in prelaid PVC conduits / pipes / raceway, but without the cost of raceway or pipe. (The cable is to be drawn from individual workstation/device/desktop area to the central communications/server room. Terminations to be carried out in any intermediate wiring closets/telecom closets by way of racks/MDF/IDF)_Data, Voice, Wi-Fi, CCTV Cabling, for details discription refer tender specfication.	Rmtr	3,328		
11.4	Supply, Installation, Testing & Commissioning of Single UTP CAT6 RJ-45 I/O of specified make inclusive of termination of CAT6 cable at each IO at workstation area / device / desktop/Data, for details discription refer tender specfication	No.	55		
11.5	Supply, Installation, Testing & Commissioning of Single UTP CAT6 RJ-45 I/O of specified make inclusive of termination of CAT6 cable at each IO at equipment side for details discription refer tender specfication	No.	55		
11.6	Supply, Installation, Testing & Commissioning of CAT6 UTP RJ-45 Patch Cords Solid Conductor 3ft for data (Hub Side)-Data as per tender specification.	No.	55		
11.7	Supply, Installation, Testing & Commissioning of CAT6 UTP RJ-45 Patch Cords Solid Conductor 7ft for Data (User Side)-Data as per tender specification.	No.	55		
11.8	Supply, Installation, Testing & Commissioning of unloaded UTP CAT6 Gigabit Modular Patch Panel for 24 ports in 1U form factor as per the tender specifications, with universal A/B labeling and 110 connector terminations on rear of panel allowing for quick and easy installation of 23 AWG cable.-Data includes Data, Voice, CCTV, Wi-Fi for details discription refer tender specfication.	No.	2		
11.9	Supply, Installation, Testing & Commissioning of Singlex Face Plate for mounting IO with required back box, for details discription refer tender specfication	No.	30		
11.1	Supply, Installation, Testing & Commissioning of Duplex faceplate for mounting IO with required back box, for details discription refer tender specfication	No.	5		
11.11	Supply, Installation, Testing and Commissioning of Two 15 AWG conductors non- plenum Speaker Cable, for High performance cable for audio signals & PA System for details discription refer tender specfication	Rmtr	550		
	Sub Total 22.0.....				
12.00	**Removing Work**				
	Removing and Stacking/Shifting of below mentined Cables from Existing Cable Tray, Trench or Shaft				
	Aluminum Cables				
12.1	70 sq.mm x 3.5 c Al.	Rmtr	138		
12.2	50 sq.mm x 3.5 c Al.	Rmtr	83		
12.3	25 sq.mm x 3.5 c Al.	Rmtr	11		
	Copper Cables				
12.4	10 sq.mm x 4 c Cu. cable	Rmtr	110		
12.5	6 sq.mm x 4 c Cu. cable	Rmtr	11		
12.6	4 sq.mm x 4 c Cu. cable	Rmtr	11		
	Sub Total 12.0.....				
	Total Amount for Elctrical Works				
Total Project Cost					