



INKEL Limited

**Regd. & Corp. Office: Door No. 7/473ZA - 5 & 6,
2nd Floor, Ajiyal Complex, Kakkanad, Cochin-682030**

Phone: 0484-6491138; Fax 0484-2978102

Email: pmc@inkelkerala.com; web: www.inkel.in

TENDER DOCUMENT

FOR THE CONSTRUCTION OF

**COMMON FACILITIES CENTRE, KINFRA DEFENCE PARK, OTTAPALAM,
PALAKKAD (DT), KERALA**

**A PROJECT FOR KERALA INDUSTRIAL INFRASTRUCTURE DEVELOPMENT CORPORATION
(KINFRA)**

(This document, in original, to be submitted as Financial Bid in Envelope 2)



Notice Inviting Tender (NIT)

(INKEL - 6)

Tender No : PMC/2016/01 dated 28/09/2016

Name of Work : COMMON FACILITIES CENTRE, KINFRA DEFENCE PARK,
OTTAPALAM, PALAKKAD (DT), KERALA

PAC : Rs. 51,15,00,000/-

EMD : Rs. 61,15,000/-

Period of Completion : 16 Months



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Email: pmc@inkelkerala.com; web: www.inkel.in

Tender No : PMC/2016/01 dated 28/09/2016
Name of Work : COMMON FACILITIES CENTRE, KINFRA
DEFENCE PARK, OTTAPALAM, PALAKKAD
(DT), KERALA

Locality : OTTAPPALAM
Last date of Receipt of Tender : 14.10.2016
Name of Bidder :

Address of Bidder :
.....
.....
.....

Registration and Class :

Validity period of Registration :

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Press Notice

INKEL Limited on behalf of Kerala Industrial Infrastructure Development Corporation (KINFRA) invites Item Rate Tenders from registered eligible contractors of PWD / CPWD / MES/ BSNL/ PSUs for the following works:

NIT No	Name of Work	PAC	EMD	Period of completion
PMC/2016/1 dated 28/09/2016	Common Facilities Centre	Rs.51.15 Crores	Rs. 61.15 Lakhs	16 months
PMC/2016/2 dated 28/0/2016	Warehouse & Common Utilities centre	Rs. 11.54 Crores	Rs.21.54 Lakhs	10 months

Last date of receipt of tender: 14.10.2016. The bid forms and other details can be obtained from website www.inkel.in and www.kinfra.org

GENERAL GUIDELINES

1. This book of “Notice Inviting Tender (NIT)” is applicable to Item rate tenders. “Notice Inviting Tender” shall be available in downloadable manner from website www.inkel.in and www.kinfra.org
2. The Notice Inviting Tender, Schedules A to F, special conditions/specifications and drawings can be downloaded from the websites mentioned above. The General Clauses of Contract and Technical Specifications are also available in the websites
3. **Intending tenderers need not submit the “General Clauses of Contract” and “Technical Specifications” along with the tender. However, both will also form part of the agreement with the successful tenderer. As such, it is deemed that the tenderer have made reference to both documents in the website of www.inkel.in or otherwise and have full knowledge of its contents, although it is not signed and attached with the tender.**
4. Provisions of NIT shall supercede the provisions of other documents.
5. The intending bidders shall quote their rates in Schedule A ie. Schedule of Quantities.

Information & Instructions to the Bidders for tendering (Forming part of Bid Document)

Managing Director, INKEL invites Item rate tenders in three cover bid system for the following work in the prescribed form, from competent and eligible contractors/firms with class 'A' registration in PWD/CPWD/MES/BSNL/PSUs, who fulfil the eligibility criteria prescribed.

Sl No	NIT No	Name of work & Location	Estimated cost put to bid	EMD	Period of Completion	Last date of submission of Tender document, EMD, Tender Fee & Other documents as specified in NIT	Time & Date of opening of bid
1	2	3	4	5	6	7	8
1.	PMC/2016/01 Dated 28.09.2016	Common Facilities Centre, Kinfra Defence Park, Ottapalam, Palakkad (Dt), Kerala	Rs. 51.15 Crores	Rs. 61.15 Lakhs	16 Months	14.10.2016 At 15:00 Hours	14.10.2016 At 15:30 Hours

1. Contractors who fulfil the following requirements shall be eligible to apply. Joint ventures are not accepted.

(a) Should have satisfactorily completed the works as mentioned below ending last day of the month previous to the one in which tenders are invited.

(i) Three similar works each costing not less than **Rs.20.46 Crores**

OR

Two similar works each costing not less than **Rs. 30.69 Crores**

OR

One similar work costing not less than **Rs.40.92 Crores**

AND

(ii) One work of any nature (either part of (i) above or a separate one) costing not less than **Rs.20.46 Crores** with some Central/State Government Department/Central Autonomous Body/ Central Public Sector Undertaking.

Similar work shall mean works of construction of RCC framed and multi storied buildings. The value of executed works shall be brought to current costing level by

enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of receipt of applications for bids.

Contractors who do not have experience/do not meet Prequalification requirements in electrical/plumbing works may also participate in tender subject to proposing a qualified subcontractor/s who meets the requirements as per particular specifications. The qualification details of subcontractor if any should be submitted along with the tender and tenders which do not have details of such subcontractors shall be rejected.

- (b) Should have had average annual financial turnover of Rs.15.35 crores on construction works during the last three years ending 31st March 2016 (copy of Certificate from CA to be submitted)
- (c) Should not have incurred any loss in more than two years during the last five years ending 31st March 2016
- (d) Should have a solvency of **Rs.20.46 Crores** (copy of original solvency to be submitted)
- 1.1 All the intending bidders should have successfully completed works as per details above during the last 7 years with Central Government Department/ State Government Department/ Central/State Autonomous Body/ Central/State Public Sector undertaking, ending last day of the month previous to the one in which tenders are invited.
- 1.2 Registration of contractors should be valid on the last date of submission of bids. In case the last date of submission of bid is extended, the registration of contractor should be valid on the original date of submission of bids.
- 1.3 The eligibility of bidders will correspond to the combined estimated cost of different components put to bid.
- 1.4 Intending bidders is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:
A certificate to this effect shall be produced by the bidder from an officer of the rank not below the rank of Executive Engineer in the Government or PSUs/ Chief Project Manager or equivalent in other organisations.
- 1.5 To become eligible for bid, the bidders shall have to furnish an affidavit as under:-

“I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of INKEL/KINFRA, then I/we shall be debarred for bidding in INKEL/KINFRA in future forever. Also, if such a violation comes to the notice before date of start of work, I/We shall forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.”

2. The intending bidder must read the terms and conditions of **INKEL-6** carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
3. Information and Instructions for bidders posted on website shall form part of bid document.
4. The tender document(s), may be downloaded free of cost. Only those bidders having a valid and active registration, on the date of bid submission, shall submit bids. However, tender processing fee (non-refundable) of **Rs. 10,500/-** in the form of DD drawn from a scheduled bank in favour of INKEL Limited payable at Cochin shall be submitted along with the bid in Envelope No. 1.
5. Earnest Money Deposit (EMD) shall be furnished as **Demand Draft in favour of INKEL Limited payable at Cochin.**
6. All bids shall be submitted in envelope(s)/ cover(s), as per the type of tender. All documents shall be signed and sealed by the authorized personnel.
7. The bidders are advised to submit the bids well before the stipulated date & time. INKEL shall not be responsible for postal/courier delays. All bids received after the stipulated date and time shall be summarily rejected.
8. Ineligible bidders or bidders who do not possess valid & active registration, on the date of bid submission, are strictly advised to refrain themselves from participating in this tender. If such instances are noticed, the same shall be treated as “fake bidding” by the respective bidder and such bidder shall be blacklisted as per INKEL rules in force. The bidders accept that they have clearly understood and agreed the terms and conditions including the Forms/Annexures of this tender. Mention of price details at any place other than the designated place, shall disqualify the bid and the bid shall be summarily rejected.
9. Tender duly signed by authorized representatives shall be submitted on or before 3 PM, on 14.10.2016 at the following address:
The Managing Director

INKEL Limited
Door No. 7/473ZA - 5 & 6, 2nd Floor, Ajiyal Complex,
Kakkanad, Cochin-682030
Ph: 0484 6491138

10. General Conditions of Contract shall be available in downloadable manner from www.inkel.in and shall form part of the agreement with the successful tenderer.
11. **Certificate of Financial Turnover:** At the time of submission of bid, contractor may submit Affidavit/ Certificate from CA mentioning Financial Turnover of last 3 years or for the period as specified in the bid document and further details if required may be asked from the contractor after opening of technical bids.
12. The Technical bid shall be opened first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the technical bid shall be communicated to them at a later date.
13. For any queries / clarifications regarding this tender, the parties may contact our office on all working days. (Ph. No : 8086833117, 0484-6491138, mail: pmc@inkelkerala.com)
14. INKEL reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.
 - 14.1. **List of Documents to be submitted in Envelope No. 1 as part of bid submission:**
 - I. Tender Processing Fee
 - II. Earnest Money Deposit
 - III. Registration certificate of the Contractor.
 - IV. Certificates of Work Experience
 - V. Certificate of Financial Turnover from CA (Form A).
 - VI. Bank Solvency Certificate (Form B)
 - VII. Any other Document as specified in this NIT.
 - VIII. Certificate of Registration for Sales Tax / VAT and acknowledgement of up to date filed return if required.
 - IX. Certificate of Registration for Service Tax and acknowledgement of up to date filed return, if required.
 - X. Preliminary Agreement in stamp paper worth Rs. 200/-
 - XI. Affidavit as per clause 1.5 of INKEL- 6
 - XII. Filled Forms A, B, C, D, E, F, G & H

The technical evaluation of bids shall be carried out only if Tender Processing Fee and EMD are submitted as stipulated in this NIT.

14.2. List of Documents to be submitted in Envelope No. 2 as part of bid submission:

- I. Price Bid (Schedule A - Schedule of Quantities as per BOQ)
- II. The soft copy of BOQ (Excel format) should be submitted in CD

The Envelope No. 2 will be opened only of those tenderers whose technical proposals furnished in Envelope No. 1 are in order.

Envelope No. 3

The sealed Envelopes 1 & 2 as above shall be placed in another Envelope 3 and sealed properly.

All the Envelopes shall also be super scribed with the Name of Work, Tender No. and Envelope No.

15. Agreement shall be drawn with the successful bidder. Bidders shall quote his rates as per various terms and conditions of this NIT which will form part of the agreement.

16. The time allowed for carrying out the work will be **16 months** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.

17. The site for the work is available.

The architectural and structural drawings shall be made available in phased manner, as per requirement of the same as per approved programme of completion submitted by the contractor after award of work.

18. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents and General Conditions of Contract Form can be seen on website www.inkel.in and shall form part of bid document.

19. Tender documents may be downloaded free of cost. The bid submitted shall be opened at **3.30 PM on 14.10.2016**

20. Earnest Money Deposit (EMD) amounting to Rs (to be filled in by bidder) (Rupees only) shall be furnished as **Demand Draft in favour of INKEL Limited payable at Cochin.**

- 21.
- a) **Performance Guarantee**, the amount collected at the time of executing contract agreement, will be 5% of the contract value (agreed PAC) and the deposit will be retained till the expiry of Defect Liability Period of THREE years. At least 50% of this deposit shall be collected in the form of Bank Guarantee from Nationalized Bank.
 - b) **Additional Performance Guarantee** will be required in all cases where quoted rate falls below 10% of the estimate cost but the maximum permissible lower limit is 25% below estimate. The 10% standard exemption will be applicable to all estimates quoted below estimate cost upto 25%. If the rate quoted by the contractor is x% below estimate cost (x lies above 10% upto 25%) the additional performance guarantee for an amount equal to (x-10)% of the estimate amount shall be obtained from the contractor.
22. **Performance Security Deposit:** It is the retention amount deducted from the running bill of the contractors in addition to the Performance Guarantee. This will be @2.5% of the gross amount of each running bill so that the amount so retained shall be 2.5% of the value of the work done till then. This can be released against Bank Guarantee on its accumulation to a minimum amount of Rs. 5 lakhs subject to the condition that the amount of Bank Guarantee except last one shall not be less than Rs. 5 Lakhs. This amount will be released after passing of final bills as in the case of refund of deposit.
23. The bid submitted shall become invalid if :
- a) The bidder is found ineligible.
 - b) The bidder does not submit all the documents (including service tax registration/ VAT registration/Sales Tax registration) as stipulated in the bid document.
24. **The bidders responsibility and understanding of the work :** Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidders shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of bid by a bidder implies that he has read this notice and all other contract documents and has

- made himself aware of the scope and specifications of the work to be done and local conditions and other factors having a bearing on the execution of the work.
25. The competent authority on behalf of Managing Director, INKEL does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without assigning any reason thereof. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
26. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
27. The competent authority on behalf of Managing Director, INKEL reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.
28. The contractor shall not be permitted to bid for works if he/she is the near relative of an officer posted by INKEL.
29. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of Kerala is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of Kerala in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of Kerala as aforesaid before submission of the bid or engagement in the contractor's service.
30. ***The bid for the works shall remain open for acceptance for a period of ninety (90) days from the date of opening of bids.*** If any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to INKEL, then INKEL shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the rebidding process of the work.
31. This notice inviting Bid shall form part of the contract document. The successful bidder/contractor, on acceptance of his bid by the Accepting Authority shall within 7 days from the stipulated date of start of the work, sign the contract consisting of:-
- a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as submitted at the

time of invitation of bid and the rates quoted at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.

b) Standard INKEL Form 7/8 or other standard INKEL Form as applicable

32. For Composite Bids

32.1. The tender processing fee and Earnest Money will be fixed with respect to the combined estimated cost put to tender for the composite bid.

32.2. The bidders must associate himself, with agencies of the appropriate class eligible to bid for each of the minor component individually.

32.3. The eligible bidders shall quote rates for all items of major component as well as for all items of minor components of work.

32.4. After acceptance of the bid by competent authority, INKEL shall issue letter of award. On receipt of Performance Guarantee, the main contractor will have to enter into an agreement with INKEL.

32.5. Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.

32.6. The main contractor may associate with agency(s) for minor component(s) conforming to eligibility criteria as defined in the bid document and has to submit detail of such agency(s) to Engineer-in-charge of minor component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-charge of minor component(s).

32.7. In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-charge of minor component. The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer-in-charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.

32.8. The main contractor has to enter into agreement with contractor(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to INKEL. In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him under intimation to INKEL.

32.9. Running payment for the major & minor components shall be made by INKEL

32.10. The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be recorded by Engineer-in-charge of major component after record of completion certificate of all other components

INKEL**Item Rate Tender & Contract for Works****(A) Tender for the work of :- COMMON FACILITIES CENTRE, KINFRA DEFENCE PARK, OTTAPALAM, PALAKKAD (DT), KERALA**

(i) To be submitted by 15.00 hours on 14.10.2016

(ii) To be opened in presence of tenderers who may be present at 15:30 hours on 14.10.2016 in the office of INKEL Limited, Cochin.

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

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

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

A sum of Rs. 21.54 lakhs has been deposited in prescribed manner as Earnest Money Deposit (EMD). If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree INKEL without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that INKEL shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

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

I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of INKEL, then I/We shall be debarred for tendering in INKEL in future forever. Also, if such a violation comes to the notice before date of start of work, I/We shall forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

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

Date:

Signature of Bidder

Postal Address:

Witness:

Address:

Occupation:

Certificate regarding near relatives

DECLARATION

(To be submitted by the Contractor regarding near relatives working in INKEL/KINFRA as per clause 16 of INKEL-6)

“I s/o Shri.....Resident of.....
.....hereby certify that none of my relative(s) as defined in clause 28 of INKEL -6 is/are employed in concerned Department of INKEL.

In case at any stage, it is found that the information given by me is false/incorrect, INKEL shall *have* the absolute right to take any action as deemed fit without any prior information to me.”

Signature of Bidder

Proforma Of Schedules

*(Separate Performa for Civil, Elect. & Hort. Works in case of Composite Tenders)
(Operative Schedules to be supplied separately to each intending tenderer)*

SCHEDULE 'A'

Schedule of quantities (as per BOQ)

SCHEDULE 'B'-

Schedule of materials to be issued to the contractor- **NIL**

Sl No	Description of item	Quantity	Rates in figures & words at which the material will be charged to the Contractor	Place of Issue
1	2	3	4	5

SCHEDULE 'C'

Tools and plants to be hired to the contractor- **NIL**

Sl No	Description	Hire Charges per day	Place of issue
1	2	3	4

SCHEDULE 'D'

Extra schedule for specific requirements/document for the work, if any.- **NIL**

SCHEDULE 'E'

Name of work: **COMMON FACILITIES CENTRE, KINFRA DEFENCE PARK,
OTTAPALAM, PALAKKAD (DT), KERALA**

Estimated cost of work: Rs. 51,15,00,000/-

(i) Earnest money: Rs. 61,15,000/- (to be returned after receiving performance guarantee)

(ii) Performance Guarantee: 5% of tendered value.

(iii) Security Deposit: 2.5% of each bill

SCHEDULE 'F'

GENERAL Office inviting tender: INKEL LIMITED
 RULES &
 DIRECTIONS:

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

Definitions:

2(v)	Engineer-in-charge	AGM, INKEL LTD.
2(viii)	Accepting Authority	MANAGING DIRECTOR, INKEL LIMITED.
2(x)	Percentage on cost of materials and labour to cover all overheads and profits	15%
2(xi)	Standard Schedule of rates	CPWD-DSR 2014.
2(xii)	Department	INKEL LIMITED.
9(ii)	upto	INKEL LTD. 7/8 modified & corrected 27/09/2016.

Clause 1

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

Clause 2

Authority for fixing compensation under clause 2.	MANAGING DIRECTOR, INKEL LIMITED.
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Clause 2A

Whether Clause 2A shall be applicable	Yes
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Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start	14 days
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Milestone as per table given below

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

Time allowed for execution of work : 16 Months

Authority to decide:

- a. Extension of time.....(Managing Director, INKEL LTD)
- b. Rescheduling of mile stones(Managing Director, INKEL LTD.
- c. Shifting of date of start in case of delay in handing over of site(Managing Director, INKEL LTD./PIC)

Clause 6, 6A	Clause applicable - (6 or 6A)	6A.
Clause 7	Gross work to be done together with net payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment	Rs 5 CRORES.
Clause 10A	List of testing equipment to be provided by the contractor at site lab	As mentioned in the special conditions of the contract
Clause 10B(ii)	Whether Clause 10 B (ii) shall be applicable	Yes
Clause 11	Specifications to be followed for execution of work	CPWD Specification Volume-I & II with upto date correction slip to be followed.
Clause 12	Type of work - PROJECT AND ORIGINAL WORK	
12.2 & 12.3	Deviation Limit beyond which clauses 12.2 and 12.3 shall apply for building work	Refer. Clause 12
Clause 16	Competent Authority for deciding reduced rates.	Managing Director, INKEL LTD.
Clause 18	List of mandatory machinery, tools & plants to be deployed by the contractor at site:-	
	Earth moving equipment	3. Bar cutting machine - 2 Nos
	1.Excavators (various sizes) - 2 Nos	4. Steel shuttering - 7500 Sq m
	Equipment for hoisting & lifting	5. Steel scaffolding - 1700 Sq m
	1.Tower - 1 No	Equipment for road work
	2.Builder's hoist - 1 No	1. Road rollers - 1 No
	Equipment for concrete work	2. Spreaders - 1 No
	1.Concrete batching plant - 1 No	3. Earth rammers - 1 No
		4. Vibratory road rollers - 1 No

2. Concrete pump - 1 No
3. Concrete transit mixer - 1 No
4. Concrete mixer (diesel) - 1 No
5. Concrete mixer (electrical) - 1 No
6. Needle vibrator (electrical) - 4 Nos
7. Needle vibrator (petrol) - 4 Nos
8. Table vibrator (elect./ petrol) - 2 Nos

Equipment for building work

1. Block making machine - 1 No
2. Bar bending machine - 2 Nos

Equipment for Transportation

1. Tippers - 2 Nos
2. Trucks - 4 Nos

Pneumatic equipment

1. Air compressor (diesel) - 2 Nos

De-watering equipment

1. Pump (diesel) 10 hp - 1 No
2. Pump (electric) 10 hp - 1 No

Power equipment

1. Diesel generators - Full Capacity for running entire machinery

(Any other plant/equipment)

Clause 31 Contractor shall make his/their own arrangement for water required for the work and nothing extra will be paid for the same. Water if available may be supplied to the contractor by INKEL LTD., the water charges @1% shall be recovered on gross amount of the work done.

Clause 36(i)

Sl No	Minimum qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i)	
						Figures	Words
1.	Project Manager with degree in corresponding discipline of Engineering	Civil	Project Manager	10	1	30,000/- per month	Rupees Thirty Thousand Per Month
2.	Graduate Engineer	Civil	Project Engineer	5	1	25,000/- per month	Rupees Twenty five Thousand Per Month
3.	Graduate Engineer	Electrical	Project Engineer	5	1	25,000/- per month	Rupees Twenty five Thousand Per Month
4.	Graduate Engineer/ Diploma	Civil	Project Engineer	2	2	15,000/- per month	Rupees Fifteen Thousand Per Month
				5			
5.	Graduate Engineer/ Diploma	Electrical	Project Engineer	2	2	15,000/- per month	Rupees Fifteen Thousand Per Month

	Diploma			5			Month
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Assistant Engineers retired from Govt services that are holding Diploma will be treated at par with Graduate Engineers.

Diploma holder with minimum 10yr relevant experience with a reputed construction company can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of Degree Engineers.

Clause 42

- i. Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2014 printed by C.P.W.D.
- ii. Variations permissible on theoretical quantities:
 - a) Cement

For works with estimated cost put to tender not more than Rs. 5 lakh.	3% plus/minus.
For works with estimated cost put to tender more than Rs.5 lakh.	2% plus/minus.
 - b) Bitumen All Works

	2.5% plus & only & nil on minus side.
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 - c) Steel Reinforcement and structural steel sections for each diameter, section and category

	2% plus/minus.
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 - d) All other materials.

	Nil
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GENERAL GUIDELINES FOR BIDDERS

1. General:

- 1.1. Letter of transmittal and forms for deciding eligibility are given in Section III.
- 1.2. All information called for in the enclosed forms should be furnished against the relevant columns in the forms. If for any reason, information is furnished on a separate sheet, this fact should be mentioned against the relevant column. Even if no information is to be provided in a column, a “nil” or “no such case” entry should be made in that column. If any particulars/query is not applicable in case of the bidder, it should be stated as “not applicable”. The bidders are cautioned that not giving complete information called for in the application forms or not giving it in clear terms or making any change in the prescribed forms or deliberately suppressing the information may result in the bid being summarily disqualified. Bids made by telegram or telex and those received late will not be entertained.
- 1.3. The bid should be type-written. The bidder should sign each page of the application.
- 1.4. Overwriting should be avoided. Correction, if any, should be made by neatly crossing out, initialling, dating and rewriting. Pages of the eligibility criteria document are numbered. They should be submitted as a package with signed letter of transmittal.
- 1.5. References, information and certificates from the respective clients certifying suitability, technical knowledge or capability of the bidder should be signed by an officer not below the rank of Executive Engineer or equivalent.
- 1.6. The bidder may furnish any additional information which he thinks is necessary to establish his capabilities to successfully complete the envisaged work. He is, however, advised not to furnish superfluous information. No information shall be entertained after submission of eligibility criteria document unless it is called for by the Employer.
- 1.7. Any information furnished by the bidder found to be incorrect either immediately or at a later date, would render him liable to be debarred from tendering/taking up of work in INKEL LTD.

2. Definitions:

- 2.1 In this document the following words and expressions have the meaning hereby assigned to them.
- 2.2 Employer: Means the Managing Director, INKEL LTD.
- 2.3 Bidder: Means the individual, proprietary firm, firm in partnership, limited company private or public or corporation.
- 2.4 “Year” means “Financial Year” unless stated otherwise.

3. Method of application:

- 3.1 If the bidder is an individual, the application shall be signed by him above his full type written name and current address.
- 3.2 If the bidder is a proprietary firm, the application shall be signed by the proprietor above his full type written name and the full name of his firm with its current address.
- 3.3 If the bidder is a firm in partnership, the application shall be signed by all the partners of the firm above their full typewritten names and current addresses, or, alternatively, by a partner holding power of attorney for the firm. In the later case a certified copy of the power of attorney should accompany the application. In both cases a certified copy of the partnership deed and current address of all the partners of the firm should accompany the application.
- 3.4 If the bidder is a limited company or a corporation, the application shall be signed by a duly authorized person holding power of attorney for signing the application accompanied by a copy of the power of attorney. The bidder should also furnish a copy of the Memorandum of Articles of Association duly attested by a Public Notary.

4. Final decision making authority.

The employer reserves the right to accept or reject any bid and to annul the process and reject all bids at any time, without assigning any reason or incurring any liability to the bidders.

5. Particulars provisional

The particulars of the work given are provisional. They are liable to change and must be considered only as advance information to assist the bidder.

6. Site visit

The bidder is advised to visit the site of work, at his own cost, and examine it and its surroundings to himself collect all information that he considers necessary for proper assessment of the prospective assignment.

7. Initial criteria for eligibility

- 7.1 The Bidder should have satisfactorily completed works during the last **Seven years** ending last day of the month previous to the one in which tenders are invited. For this purpose cost of work shall mean gross value of the completed work including cost of material supplied by the Government/Client but excluding those supplied free of cost. This should be certified by an officer not below the rank of Executive Engineer/Project Manager or equivalent.
- 7.2 The bidder should own constructions equipment as per list required for the proper and timely execution of the work. Else, he should certify that he would be able to manage the equipment by hiring etc., and submit the list of firms from whom he proposes to hire.

7.3 The bidder should have sufficient number of Technical and Administrative employees for the proper execution of the contract. The bidder should submit a list of these employees stating clearly how these would be involved in this work.

7.4 The bidder's performance for each work completed in the last Seven years and in hand should be certified by an officer not below the rank of Executive Engineer or equivalent and should be obtained in sealed cover.

8. Evaluation criteria

The details submitted by the bidders will be evaluated by technical committee formed for the work.

Even though any bidder may satisfy the above requirements, he would be liable to disqualification if he has:

- a. made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the eligibility criteria document,
- b. record of poor performance such as abandoning work, not properly completing the contract, or financial failures / weaknesses etc.

9. Financial information

Bidder should furnish the following financial information:

Annual financial statement for the last five year in (Form "A") and solvency certificate in (Form "B")

10. Experience in works highlighting experience in similar works

10.1 Bidder should furnish the following:

- a. List of all works of similar nature successfully completed during the last seven years in (Form "C").
- b. List of the projects under execution or awarded in (Form "D").

10.2 Particulars of completed works and performance of the bidder duly authenticated/certified by an officer not below the rank of Executive Engineer or equivalent should be furnished separately for each work completed or in progress in (Form "E").

10.3 Information in (Form "D") should be complete and no work should be left out.

11. Organisation information

Bidder is required to submit the information in respect of his organization in Forms "F & G"

12. Construction plant and equipment

Bidder should furnish the list of construction plant and equipment including steel shuttering, centering and scaffolding to be used in carrying out the work(in Form

“H”). Details of any other plant & equipment required for the work not included in Form “F” and available with the applicant may also be indicated.

13. Letter of transmittal

The bidder should submit the letter of transmittal attached with the document.

14. Opening of Price bid

The financial bids of only the qualified and technically acceptable bidders shall be opened at the notified time, date and place in the presence of the qualified bidders or their representatives. The bid shall remain valid for ***a period of 90 days from the date of opening of technical bids.***

15. Award criteria

15.1 The employer reserves the right, without being liable for any damages or obligation to inform the bidder, to:

- a. Amend the scope and value of contract to the bidder.
- b. Reject any or all the applications without assigning any reason.

15.2 Any effort on the part of the bidder or his agent to exercise influence or to pressurize the employer would result in rejection of his bid. Canvassing of any kind is prohibited.

INFORMATION REGARDING ELIGIBILITY

LETTER OF TRANSMITTAL

From:

.....
.....
.....
.....

To

MANAGING DIRECTOR
INKEL LIMITED, COCHIN-682030

Sir,

Subject: Submission of bids for the work of

Having examined the details given in press notice and bid document for the above work, I/we hereby submit the relevant information.

1. I/we hereby certify that all the statement made and information supplied in the enclosed forms A to H and accompanying statement are true and correct.
2. I/we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I/we submit the requisite certified solvency certificate and authorize the Managing Director to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I/we also authorize Managing Director to approach individuals, employers, firms and corporation to verify our competence and general reputation.
4. I/we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following works:

Name of work:

Enclosures

Date of submission:

Signature(s) of Bidder(s).

(Seal of bidder)

FORM 'A'**FINANCIAL INFORMATION**

- I. Financial Analysis - Details to be furnished duly supported by figures in balance sheet/ profit & loss account for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

Years		
2013-14	2014-15	2015-16

- (i) Gross Annual turnover on construction works.
(ii) Profit/Loss.
- II. Financial arrangements for carrying out the proposed work.
- III. Solvency Certificate from Bankers of the bidder in the prescribed Form "B".

Signature of Chartered Accountant with Seal

Signature of Bidder(s)

FORM "B"

FORM OF BANKERS' CERTIFICATE FROM A SCHEDULED BANK

This is to certify that to the best of our knowledge and information that M/s./ Shri.....having marginally noted address, a customer of our bank are/is respectable and can be treated as good for any engagement upto a limit of Rs..... (Rupees.....)

This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature)
For the Bank

NOTE:

1. Bank's certificates should be on letter head of the Bank, sealed in cover addressed to tendering authority.
2. In case of partnership firm, certificate should include names of all partners as recorded with the Bank.

FORM 'C'

DETAILS OF ALL WORKS OF SIMILAR CLASS COMPLETED DURING THE LAST 7 YEARS ENDING LAST DAY OF THE MONTH OF AUGUST 2016

Sl No	Name of work/ Project and Location	Owner of sponsoring organization	Cost of work in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation/ arbitration cases pending/ in progress with details*	Name & address/ Telephone number of officer whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

* Indicate gross amount claimed and amount awarded by the Arbitrator.

Signature of Bidder(s)

FORM 'D'

PROJECTS UNDER EXECUTION OR AWARDED

Sl No	Name of work/ Project and Location	Owner of sponsoring organization	Cost of work in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Upto date percentage progress of work	Slow Progress if any and reasons thereof	Name & address/ Telephone number of officer whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

Certified that the above list of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

Signature of Bidder(s)

FORM 'E'

PERFORMANCE REPORT OF WORKS REFERRED TO IN FORMS "C" & "D"

1. Name of work/project & location
2. Agreement no.
3. Estimated cost
4. Tendered cost
5. Date of start
6. Date of completion
 - a. Stipulated date of completion
 - b. Actual date of completion
7. Amount of compensation levied for delayed completion, if any
8. Amount of reduced rate items, if any
9. Performance Report

Dated:

Executive Engineer or Equivalent

FORM "F"**STRUCTURE & ORGANISATION**

1. Name & address of the bidder
2. Telephone no./Fax no./email
3. Legal status of the bidder (attach copies of original document defining the legal status)
 - a. An Individual
 - b. A proprietary firm
 - c. A firm in partnership
 - d. A limited company or Corporation
4. Particulars of registration with various Government Bodies (attach attested photocopy)

Organisation/Place of registration**Registration No.**

- a)
- b)
- c)
5. Names and titles of Directors & Officers with designation to be concerned with this work.
6. Designation of individuals authorized to act for the organization
7. Was the bidder ever required to suspend construction for a period of more than six months continuously after he commenced the construction? If so, give the name of the project and reasons of suspension of work.
8. Has the bidder, or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment.
9. Has the bidder, or any constituent partner in case of partnership firm, ever been debarred/black listed for tendering in any organization at any time? If so, give details.
10. Has the bidder, or any constituent partner in case of partnership firm, ever been convicted by the court of law? If so, give details.
11. In which field of Civil Engineering construction the bidder has specialization and interest?
12. Any other information considered necessary but not included above.

Signature of Bidder(s)

FORM 'G'
DETAILS OF TECHNICAL & ADMINISTRATIVE PERSONNEL TO BE EMPLOYED FOR THE WORK

Sl No	Designation	Total Number	Number available for this work	Name	Qualification	Professional experience and details of work carried out	How these would be involved in this work	Remarks
1	2	3	4	5	6	7	8	9
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Signature of Bidder(s)

FORM 'H'

DETAILS OF CONSTRUCTION PLANT AND EQUIPMENT LIKELY TO BE USED IN CARRYING OUT THE WORK

Sl No	Name of Equipment	Nos	Capacity	Age	Condition	Ownership status			Current Location	Remarks
						Presently owned	leased	To be purchased		
1	2	3	4	5	6	7	8	9	10	11
	Earth moving equipment 1.Excavators (various sizes)									
	Equipment for hoisting & lifting 1.Tower 2.Builder's hoist									
	Equipment for concrete work 1.Concrete batching plant 2.Concrete pump 3.Concrete transit mixer 4.Concrete mixer (diesel) 5.Concrete mixer (electrical) 6. Needle vibrator (electrical) 7.Needle vibrator (petrol) 8.Table vibrator (elect./ petrol)									
	Equipment for building work 1. Block making machine 2. Bar bending machine 3. Bar cutting machine 4. Wood thickness planer 5. Drilling machine 6. Circular saw machine 7. Welding generators									

8. Welding transformer								
9. Cube testing machines								
10. M.S. Pipes								
11. Steel shuttering								
12. Steel scaffolding								
13. Grinding/polishing machines								
Equipment for road work								
1. Road rollers								
2. Bitumen paver								
3. Hot mix plant								
4. Spreaders								
5. Earth rammers								
6. Vibratory road rollers								
Equipment for transportation								
1. Tippers								
2. Trucks								
Pneumatic equipment								
1. Air compressor (diesel)								
De-watering equipment								
1. Pump (diesel)								
2. Pump (electric)								
Power equipment								
1. Diesel generators								
(Any other plant/equipment)								

Signature of Bidder(s)

PROFORMA FOR PRELIMINARY AGREEMENT

(To be executed on stamp paper of value Rs.200/- and submitted along with tender).

Preliminary agreement entered into on this..... / day of **Two thousand Sixteen** between **INKEL LTD.) Cochin** (Hereinafter called owner on one part and..... (name and address of the Contractor) (Hereinafter called the Contractor) on the other part for the execution of the agreement as well as the work of dated And whereas the notice inviting tenders it is stated as follows. Before commencing the work of within a week of the date when the acceptance of tender has been intimated to him, shall be remitted to INKEL LTD., an amount of 5% of the work order value as Performance Security Deposit. 50 % of this amount shall be in the form of Bank Guarantee from a Scheduled/ Nationalized bank and execute the contract agreement within seven days from the date of the letter of acceptance or ten days from the date of work order whichever is earlier. The validity of BG shall be up to the period of completion of work / the extended period of completion of work with an additional claim period of three months.

If he fails to do this or fail to maintain a specified rate of progress, the EMD shall be forfeited to INKEL LTD and fresh tenders shall be called for or the matter otherwise disposed. If as a result of such measures due to the default of the tender to pay the requisite deposit sign contracts to take possession of the work any loss to the INKEL LTD. results, the same will be recovered from him as arrears of revenue but should it be a saving to INKEL LTD. the original contractor shall have no claim whatever to the difference. Recoveries to this or any other account will be made from the sum that may be due to contractor on this or any other contracts or under the Revenue Recovery Act or otherwise as the INKEL LTD may decide.

Now therefore these present witness and it is mutually agreed as follows:

- 1.The terms and condition for the said contract having been stipulated in the said tender form to which the contractor has agreed, a copy of which is appended, and which forms part of this agreement, it is agreed that the terms and conditions stipulated there in shall bind the parties to this agreement, except to the extent to which they are abrogated or altered by express terms and conditions herein, agreed to and in which respect the express provisions herein shall supersede those of the said tender form.
2. The Contractor hereby agree and undertake the perform and fulfil all the operation and obligations connected with the execution of the said contract work viz. - for INKEL Ltd, Cochin
3. If the Contractor does not come forward to execute the original agreement after the said work is awarded and letter of acceptance issued in his favour or commits breach of any of the Conditions of the Contract as stipulated in the Notice inviting Tenders as quoted above within the period stipulated, INKEL LTD may rearrange the works

otherwise or get it done otherwise at the risk and cost of the contractor and the loss so sustained by INKEL LTD can be realizing from the contractor under the Revenue Recovery Act as if arrears of land revenue as assessed, quantified and fixed by an adjudicating authority consisting of INKEL LTD or any other officer or officers authorised by INKEL LTD taking into consideration the prevailing rates and after giving due notice to the Contractor. The decision taken by such authorised officer or officers shall be final and conclusive and shall be binding on the contractor.

4. The contractor further agrees that any amount found due to INKEL LTD under or by virtue of this agreement shall be recoverable from the Contractor from his E.M.D. and his properties, movable and immovable as arrears of land revenue under the provision of the Revenue Recovery Act for the time being in force or in any other manner as INKEL LTD may deem fit in this regard.

In witness where of, Managing Director, INKEL LTD and the Contractor, have set their hands on the day and year first above written, signed by Sri..... Managing Director, INKEL Ltd, Cochin

In the presence of witness

- 1.
- 2.

Signed and delivered by Sri....., Contractor,
in the presence of witness.

- 1.....
- 2.....

OTHER INSTRUCTIONS TO BIDDERS

1. All other relevant forms shall be in the format prescribed CPWD Manual.
2. All Statutory approvals both initial & final wherever necessary for the execution of work from concerned authorities shall be obtained by Contractor at his own expense. However statutory fees will be reimbursed on submission of receipts.
3. All queries regarding the tender shall be sent to us by email pmc@inkelkerala.com on or before 5:00PM on 07.10.2016. Addendum if any shall be posted in the website www.inkel.in till 07.10.2016
4. Representatives of bidders/firms participating in the pre-bid meeting shall produce authorisation from the firm.

SCOPE OF WORK

1. The proposed building is a multi storied RCC framed structure having four floors (G + 3 floors) with 4.2 m floor height for each floor.
 - 1.1 Foundation - Isolated RCC footing with suitable grade beams are proposed for foundation. Pre-constructional anti termite treatment is considered in this building.
 - 1.2 Superstructure -The walls are proposed to be constructed with solid block masonry in cement mortar. The external and internal walls are proposed to be plastered with 18mm thick cement plaster in 2 coats and 12mm thick cement plaster respectively.
 - 1.3 Finishing shall be with exterior emulsion paint / interior acrylic emulsion paint.
 - 1.4 Proposed joinery works are proposed to be provided with powder coated aluminium fitted with pre-laminated particle board for panelling and toughened glass. The entrance door will be provided with frameless toughened glass door and fixed toughened glass on either side. It is proposed to provide collapsible steel shutter in front of entrance door for security measure.
 - 1.5 Flooring at common places only is considered. Industrial vitrified tile flooring for the corridors, granite flooring for staircase steps and granite fascia for passenger lift. Toilet floors and walls are finished with ceramic tiles.
 - 1.6 Structural glazing / aluminium composite walls are also proposed for the external walls.
 - 1.7 The staircase and balcony are provided with Stainless steel handrail both for a height of 1200mm.
 - 1.8 Provision for services such as site development including cutting and levelling, retaining walls with RCC / RR masonry, sub grade preparation works for road, yard and parking area, RCC trenches and drains, RCC sump / overhead tank, RCC STP tank, fire and domestic tanks is also included.
 - 1.9 Provision for water supply and sanitary installations, internal and external electrification works and lift (service lift and fire lift) also envisaged under the scope of the work.

PARTICULAR SPECIFICATIONS

A. Civil works

1. Steel reinforcement (Fe 500) for the work shall be procured from approved sources only. Please refer General conditions of contract for list of approved sources.
2. Cement used for the work shall be OPC only. The contractor has to give intimation with necessary invoice to the Engineer in charge appointed by INKEL on the arrival of the quantity of cement at site. Please refer General conditions of contract for list of approved sources.
3. M - Sand shall be sourced from approved manufactures only.
4. Concrete - Contractor shall mobilise in-house concrete batching plant of approved make and size and establish permanent pumping main to the various areas of concreting. No concrete shall be permitted in volumetric batches except PCC.
5. Field Testing Laboratory -
The contractor has to set up a field testing laboratory with a qualified person for conducting the tests at site before commencement of work. The following equipments shall be used in the laboratory:
 - a) Balances:
 - i) 7kg to 10kg capacity, semi - self indicating type - accuracy 10gm
 - ii) 500gm capacity, semi - self indicating type - accuracy 1gm
 - iii) Pan Balance - 5kg capacity - accuracy 10gm
 - b) Ovens - electrically operated, thermostatically controlled upto 110°C - sensitivity loc.
 - c) Sieves: as per IS 460 - 1962.
 - i) IS Sieves - 450mm internal dia of sizes 100mm, 80mm, 63mm, 50mm, 40mm, 25mm, 20mm, 12.5mm, 10mm, 6.3mm, 4.75mm complete with lid and pan.
 - ii) IS Sieves - 200mm internal dia (brass frame) consisting of 2.36mm, 1.18mm, 500 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan.
 - d) Sieve shaker capable of 200mm and 300mm dia sieves, manually operated with timing switch assembly.
 - e) Equipment for slump test - slump cone, steel plate, tamping rod, steel scale, scoop.
 - f) Compression testing Machines
 - g) Cube test moulds-12 sets
 - h) Glass Jar

APPENDICES

- Appendix 1 - Tender drawings (separately attached)
- Appendix 2 - General Clauses of contract (GCC)
- Appendix 3 - Technical Specifications

B. Plumbing works

Approved List of Equipment, Materials and Brand Names

Sl. No	Equipment/Materials	Brand Names Proposed
1	IGBC Rated Sanitary Fixtures and Accessories	Hindware / Jaquar / Parryware or equal.
2	IGBC Rated Tap (CP) Fittings and Accessories	Jaquar / Hindware / Parryware or equal.
3	uPVC Pipes and Fittings	Supreme / Astral / Prince or equal.
4	uPVC SWR Pipes and Fittings, Solvent Welded type and Ring Fit Joint type	Ashirvad / Astral / Prince or equal.
5	uPVC Pipes, Sch. 40 & 80 and Sch. 80 Fittings (ASTM D 1785 and ASTM D 2467)	Ashirvad /Astral/ Ajay or equal.
6	CPVC Pipes and Fittings (ASTM D 2846, SDR 11)	Ashirvad /Astral/ Ajay or equal.
7	Stainless Steel Grating, Cockroach Trap, Cover for Concealed Trap and Cover for Clean Out.	Chilly or equal
8	Rain Water Outlet	Neer / SGE or equal.
9	Butterfly Valve.	Intervolve /Kartar / Kirloskar or equal.
10	Forged Brass Ball Valves	RB/TBS/Zoloto or equal.
11	Sluice Valve	Kirloskar / H Sarker / Kartar or equal
12	Gun Meat Gate Valve	Orient / TBS/ Zoloto or equal
13	GM Non Return Valves.	RB / TBS / Zoloto or equal.
14	Pressure Reducing Valves	Hawk or equally approved

15	GM Float Valve.	Viking or equally approved.
16	Ball Type Foot Valve	Normex or equally approved
17	Air Release Valves.	RB/TBS/Zoloto or equal
18	Y-Strainer	Kartar / TBS / Zoloto or equal
19	Back Flow Preventing Devise	SGE or equal
20	Solid Interceptor	Ashivad Pipes or equal
21	Oil /Grease Interceptor	Ashivad Pipes / Aco / Kessel or equal
22	Packaged Hydro - Pneumatic Water Transfer/ Distribution Pump Set.	Kirloskar / Grundfos /CRI or equal
23	Electric Water Heater	Racold or equal
24	Cast/Ductile Iron Manhole Covers & Gratings	NECO CENTRI or equal
25	Pipe Supporting System, G. I.	HI-Tech Pipe Supports or Equal
26	Paint Protection System	Berger, India or equal

Please refer General Clauses of Contract uploaded as part of this NIT in the INKEL website- www.inkel.in

C. Electrical works

List Of Approved Makes		
Sl. No.	Description	Approved Makes
1	11kv Vcb Panel	Megawin/Intrans
2	Transformer	Kel/Megawin/Intrans
3.A	Generator - Engine	Cummins / Caterpillar / Greaves/ Perkins/ Kirloskar
3.B	Generator - Alternator	Kirloskar / Leroy Somer / Kel /Avkc/Stamford
4	Ht Cables	Gloster / Universal / Nicco/Kei/Polycab
5	Ht Termination Kit	Raychem / M_Seal/ 3m
6	Lt Panels / Busduct	Any Cpri Approved Fabricator With Better Infra-Structure And Testing Facility

7	Acb/Mccb / Isolators	L & T/Siemens/ Schneider
8	Capacitor With Detuned Filters	L&T /Mehtar / Epcos
9	Automatic Change Over Switches	Hpl Socomec /L&T/
10	Current Transformer	Ae / Kappa / Intrans / Voltamp
11	Relays	Gec Alstom / Easun / Rishab
12	Instruments	Ae / Simco / Rishline/Meco/Elmeasure
13	Indicating Lamps-	Technic / L&T
14	Selector Switches	Salzer / Kaycee /Abb / L&T
15	Frls Wires & Single Core Cables	Finolex / Polycab / Rr-Kabel / Kei
16	Lt Cables Al /Cu	Universal / Polycab / Kei/Gloster
17	Ms Conduits-Isi	Gupta / Bharat / Akg
18	Pvc Conuits-Isi	Avonplast /Balco/Konseal/ Precision
19	Distribution Boards	Legrand / Schneider / Hager/ L&T
20	Mcb, Elcb, Rcbo	Legrand / Schneider / Hager/ L&T
21	Metal Clad Plug & Sockets	Legrand / Schneider / Hager/ L&T
22	Ip-65 Plug & Sockets And Flp Junction Boxes	Legrand / Schneider / Hager/ L&T
23	Switches & Sockets	Legrand Myrius/Mk Wraparound / North-West/ Schneider Opale
24	Gi Anodised Metal Box	Legrand/Mk / Schneider / North-West / Crabtree
25	Cable Glands	Vbi / Comet / Jainso/ Dowells
26	Crimping Sockets	Dowells / Jainson
27	Surge Suppressor	Obo Betterman / Siemens / Hager
28	Cable Trays	Profab
29	Light Fittings/Street Lights	Philips / Osram/Crompton/Wipro
30	Earth Electrode	Ashlok / Galaxy / Safe Earth
31	Ceiling Fan / Eshhaust Fan	Almonard / Crompton/Bajaj
32	Automatic Tranfer Switch (Ats)	Asco /Socomec/ Emerson
33	Floor Race Ways , Junction Boxes , Heavy Duty Floor Box	Profab
34	Multifunction Meter	L&T, Secure, Schneider, Satec/El-Measure
35	Energy Meters	Havells/L&T/Abb/Simco / Enercon
36	Street Lighting	Bajaj /Crompton/Schreder/Wipro/Osram

1.0	11KV HT INDOOR VCB PANEL
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<p>The 5 Panel HT Board panels will be of metal clad, free standing construction, suitable for operation on 11KV 3 Ph, 50 Hz, AC earthed system and fabricated from sheet steel, with powder coat finish painting of shade RAL 7032 . The panel shall contain components as mentioned below, complete with busbar inter connections control wiring designation labels, caution labels, sealing and pad locking facilities and wherever necessary space provision for entry of HT cables from the bottom through detachable gland plates. - 1 SET</p>				
<p>Scope of supply should include the following but not restricted and other items which are required for the satisfactory operation and performance of the system can be considered as required.</p>				
A :Switch Gear				
Sl.No	Description	Technical Data	1 No. - I/C.	1 No. - O/G.
1	VCB	11KV,800A, 26.3KA	1	
B: Non Switchgear				
2	Current Transformer	Ratio : 100/5A, CLASS:0.5 15VA, STC:18.3KA/1.0SEC.	1	4
3	TOD METER - Provision	110 V , 5A	1	4
4	Space Heater with switch and Thermostat	60 W,strip type,230 V,AC	1	
5	Panel Illumination Lamp with door switch	CIL,LED, 230 V AC	1	
6	Control Terminal Blocks	Stud type 30 amps,1100 V grade	lot	
7	Earth Bus bar	Electrolytic Copper 50 x 6 mm	lot	
8	Shunt Trip Coil	230 V AC	1	
9	Indications	Mechanical ON. OFF . TRIP	3	
10	Main Bus bar	630A ,Electrolytic Copper of size 50 x 10 mm,Color sleeved	lot	
11	Test terminal blocks for CTs with CT shorting Links		1	
12	Removable Power cable gland plate		1	
13	Removable Control cable gland plate		1	
14	Earth Switch on HT Cable side		1	
15	Plug and Socket	5 Amps	1	
16	PT	11KV/ 110 V ,15VA, Cl. 0.5	1	
17	Common Power Pack suitable for Incoming and outgoing panels-SMPS 30Min backup		1	

18	Provision for receiving 230V A.C External Source	10A DP MCB - for Shunt Trip	1	
	BOTH incoming and outgoing cable box provision on either side			

Please refer General Clauses of Contract uploaded as part of this NIT in the INKEL website- www.inkel.in

NAME OF WORK :CONSTRUCTION OF COMMON FACILITIES CENTRE INCLUDING DEVELOPMENT OF SITE, INTERNAL WATER SUPPLY AND SANITARY INSTALLATIONS, ELECTRIFICATION WORKS ETC

PRICE BID - SUMMARY

SL. NO.	DESCRIPTION	AMOUNT IN FIGURES	AMOUNT IN WORDS
1.00	TOTAL FOR PART - A: CIVIL WORKS		
2.00	TOTAL FOR PART - B: WATER SUPPLY AND SANITARY WORKS		
3.00	TOTAL FOR PART - C: ELECTRICAL WORKS		
	GRAND TOTAL		

SEAL AND SIGNATURE OF AUTHORIZED SIGNATORY



Name of work : Construction of Common Facilities Centre including development of site, internal water supply and sanitary installations, electrification works etc

SCHEDULE OF QUANTITIES

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
PART A - CIVIL WORKS						
1.00	SUB HEAD 1.00 - EARTH WORK					
1.01	Clearing grass and removal of the rubbish upto a distance of 50m outside the periphery of the area cleared.	sqm	12,710.00			
1.02	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1m above ground level and removal of rubbish outside the periphery of the area cleared.	sqm	6,360.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
1.03	Felling trees of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable materials away from the site.					
a	Beyond 30 cm girth upto and including 60 cm girth	each	20.00			
b	Beyond 60 cm girth upto and including 120 cm girth	each	10.00			
1.04	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including disposal of excavated earth upto 100 m and lift upto 1.5 m, the disposed earth to be used for filling the adjoining land in layers of 30cm depth, consolidating each deposited layer by rolling with 8 MT capacity road roller, watering,	sqm	3,820.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	ramming and levelling etc complete as directed by the Engineer-in-charge (The rate is inclusive of the cost for cutting, lifting, loading and unloading, transportation, consolidating, watering, levelling etc complete): All kinds of soil					
1.05	Earth work in excavation in all kinds of soil by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) ithe disposed earth to be used for filling the adjoining land in layers of 30cm depth, consolidating each deposited layer by rolling with 8 MT capacity raod roller, watering, ramming and levelling etc complete as directed by the Engineer-in-charge (The rate is inclusive of the cost for cutting, lifting, loading and unloading, transportation, consolidating, watering, levelling etc complete)	cum	9,020.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
1.06	Earth work in excavation in Ordinary rock by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 200 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed.	cum	4,250.00			
1.07	Earth work excavation in all kinds of soil for foundation, trenches, grade beams, etc including strutting, shoring and packing cavities wherever required, bailing /pumping out water from any depth, if required and getting out the excvated soil and back filling the soil as required in layers not exceeding 20 cm in depth, consolidating each layer by watering, ramming etc and disposing of surplus excavated earth, stacking of serviceable stones, disposal of unserviceable materials away from	cum	1,230.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	site with initial lead upto 100m and lift upto 1.5m including breaking clods, watering, ramming and sectioning of soil bank etc complete as directed by the Engineer-in-charge.					
1.08	Earth work excavation in ordinary rock for foundation, trenches, grade beams, etc including strutting, shoring and packing cavities wherever required, bailing /pumping out water from any depth, if required and getting out the excvated soil and back filling the soil as required in layers not exceeding 20 cm in depth, consolidating each layer by watering, ramming etc and disposing of surplus excavated earth with initial lead upto 200m and lift upto 1.5m including breaking clods, watering, ramming and sectioning of soil bank etc complete as directed by the Engineer-in-charge.	cum	3,160.00			
	Earth work excavation in Hard rock	cum				

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
1.09	(controlled blasting) with disposal upto 200 metres (Excavation for roadway in hard rock with controlled blasting by drilling, blasting and breaking, trimming of bottom and side slopes in accordance with requirements of lines, grades and cross sections, loading and disposal of cut road with in all lifts and leads upto 200 metres)		7,260.00			
1.10	Extra for every additional lift of 1.5m or part thereof in excavation/ banking excavated or stacked materials					
a	for all kinds of soil.	cum	300.00			
b	Ordinary or hard rock	cum	5,090.00			
1.11	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth,	cum	7,580.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	consolidating each deposited layer by ramming and watering, lead up to 100 m and lift upto 1.5 m.					
1.12	Providing and applying pre constructional anti termite treatment by injecting chemical emulsion concentrate 1% chloropyrifos or chlordane emulsiable concentrate 1% for creating a chemical barrier as per IS 6313 including drilling holes, injecting chemical emulsion as per specifications, making good the drilled portion etc complete and making good the drilled portion etc complete and conforming to manufacturers specifications and as directed by the Engineer-in-charge.	Sq m	5,670.00			
	TOTAL FOR SUB HEAD 1.00 - EARTH WORK					
2.00	SUB HEAD 2.00 - CONCRETE AND ALLIED WORKS					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
2.01	Providing and laying 1:4:8 (1 cement : 4 coarse sand :8 graded stone aggregate 40 mm nominal size) machine mixed and properly consolidated with hand rammers, including the cost and conveyance of all materials, labour, centering and shuttering, curing, lead lift etc complete at all levels upto plinth level and as directed by Engineer-in-charge.	cum	1,240.00			
2.02	Providing and laying 1:2:4 (1 cement : 2 coarse sand :4 graded stone aggregate 40 mm nominal size) machine mixed and properly consolidated with hand rammers, including the cost and conveyance of all materials, labour, centering and shuttering, curing, lead lift etc complete at all levels upto plinth level and as directed by Engineer-in-charge.	cum	30.00			
2.03	Supplying and filling cement sand mix 1:10 including cost and conveyance of all materials, labour charges for	cum	40.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	compacting, levelling, curing etc complete (toilets in all floors)					
	TOTAL FOR SUB HEAD 2.00 - CONCRETE AND ALLIED WORKS					
3.00	SUB HEAD 3.00 - RCC WORKS					
3.01	RCC Walls - Reinforced cement concrete work in walls using 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level, cost of centering, shuttering, finishing and excluding cost of reinforcement etc complete					
a)	Wall thickness upto 150mm	cum	170.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
b)	Wall thickness above 150mm	cum	780.00			
3.02	Drain bottom slab - Providing and laying in position specified grade of reinforced cement concrete, the cost of centering, shuttering, finishing and excluding cost of reinforcement - All works up to plinth level : 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	790.00			
3.03	Cast insitu Cover slab for drain - Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor five level, the cost of centering, shuttering, finishing and excluding the cost of reinforcement, with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	100.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
3.04	Pre-cast cover slab for drain - Providing and fixing up to floor five level precast cement concrete string or lacing courses, cover slabs, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, stair cases, etc., in 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), cost of required centering complete.	cum	20.00			
3.05	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work for all heights, using cement content as per approved design mix, including pumping of concrete to site of laying but including the cost of centering, shuttering, finishing and excluding cost of reinforcement, including admixtures in recommended proportions as per IS:					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately as per CPWD Specifications.					
	All works upto plinth level					
i)	Foundations, footings, bases of columns etc for mass concrete	cum	1,440.00			
ii)	Grade beams / plinth beams	cum	390.00			
iii)	Pedestals, columns	cum	70.00			
3.06	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	concrete for reinforced cement concrete work for all heights, using cement content as per approved design mix, including pumping of concrete to site of laying but including the cost of centering, shuttering, finishing and excluding cost of reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately as per CPWD Specifications.					
	All work above plinth level upto floor V level					
i)	Columns, mullions, pillars, abutments, etc	cum	1,080.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
ii)	Walls of any thickness	cum	560.00			
iii)	Lintels, Beams, cantilevers etc	cum	1,740.00			
iv)	Suspended floors, roofs, landings, balconies etc	cum	4,300.00			
v)	Staircase waist slab /steps	cum	30.00			
3.07	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work for all heights, using cement content as per approved design mix, including pumping of concrete to site of laying but including the cost of centering, shuttering, finishing and excluding cost of reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately as per CPWD Specifications.					
	For floor VI & VII					
i)	Columns, pillars, abutments, etc	cum	75.00			
ii)	Lintels, Beams, cantilevers etc	cum	25.00			
iii)	Suspended floors, roofs, landings, sunshades, balconies etc	cum	25.00			
iv)	Staircase waist slab /steps	cum	3.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
3.08	Extra for providing richer mixes at all floor levels : Providing <u>M-30 grade concrete</u> instead of M-25 grade BMC /RMC. (Note:- Cement content considered in M-30 is @ 340 kg/ kg/cum). Excess/less cement over the specified cement content used is payable /recoverable separately.	cum	2,218.00			
3.09	Extra for providing richer mixes at all floor levels : Providing <u>M-35 grade concrete</u> instead of M-25 grade BMC / RMC. (Note : Cement content considered in M-35 is @ 350 kg/ cum)	cum	6,320.00			
3.10	Add for using extra cement in the items of design mix over and above the specified cement content therein.	kg	215,160.00			
3.11	Reinforcement steel - Providing and fixing reinforcement for RCC work with High Yeild Strength Deformed (HYSD) bar of various diameters and grade of steel as specified below confirming to IS 1786 in grade Fe-500	kg	1,311,470.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	HYSD or equivalent BS specification including cutting, bending, hoisting, fabricating and placing in position at all levels /floors according to drawings and binding the reinforcement with galvanised annealed binding wire of double fold of 18 guage and providing PVC cover blocks for placing the reinforcement in position and for maintaining the cover specified and or according to relevant IS or equivalent BS code. Note: Unless noted otherwise the measurements in accordance with IS1200 or equivalent BS shall be provided. Cover block, wastage and binding wire will not be measured and shall be included in the quoted rates					
3.12	Providing and fixing anchor bars of the following diamters tor steel in foundation up to 1.5 m deep in rock and 1.5 m above rock for following diameter tor steel dowel bar in foundation including drilling suitable diameter bore hole in rock with necessary bending, hooking, tying					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	reinforcement in position and grouting etc and excluding the cost of reinforcement complete as per drawing and specifications.					
a	16mm dia	each	554.00			
b	20mm dia	each	554.00			
c	25mm dia	each	554.00			
	TOTAL FOR SUB HEAD 3.00 - RCC WORKS					
4.00	SUB HEAD 4.00 - MASONRY WORKS					
4.01	Random rubble masonry with hard stone in foundation and plinth including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse	cum	90.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	sand : 12 graded stone aggregate 20 mm nominal size) at window sills, ceiling level and the like with Cement mortar 1:6 (1 cement : 6 coarse sand) and also including raking out of joints, curing, cost and conveyance of all materials, lead, lift etc complete as directed by the Engineer-in-charge.					
4.02	Random rubble masonry with hard stone available at site, in foundation and plinth including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at window sills, ceiling level and the like with Cement mortar 1:6 (1 cement : 6 coarse sand) and also including raking out of joints, curing, cost and conveyance of all materials but excluding cost of rubble , lead, lift etc complete as directed by the Engineer-in-charge.	cum	85.00			
	Masonry with solid concrete blocks in	cum				

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
4.03	foundation and plinth in blocks of size 30x20x20cm, grade D of block density not less than 1800 kg/cum and average compressive strength of 4 N/mm ² and minimum strength of individual blocks 3.2 N/mm ² (as specified in IS 2185 part I 1979 Grade D) blocks constructed with cement mortar 1:6 for 20cm thick walls including cost and conveyance of all materials to site, labour charges, hire and labour for scaffolding, curing etc complete.		680.00			
4.04	Masonry with solid concrete blocks above plinth, blocks of size 30x20x20cm, grade D of block density not less than 1800 kg/cum and average compressive strength of 4 N/mm ² and minimum strength of individual blocks 3.2 N/mm ² (as specified in IS 2185 part I 1979 Grade D) blocks constructed with cement mortar 1:6 for 20cm thick walls including cost and conveyance of all materials to site, labour charges, hire					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	and labour for scaffolding, curing etc complete.					
a	Upto floor V level	cum	1,470.00			
b	Floor VI & VII	cum	150.00			
4.05	Masonry with solid concrete blocks , blocks of size 30x10x20cm , grade D of block density not less than 1800 kg/cum and average compressive strength of 4 N/mm ² and minimum strength of individual blocks 3.2 N/mm ² (as specified in IS 2185 part I 1979 Grade D) blocks constructed with cement mortar 1:5 for 10cm thick walls including cost and conveyance of all materials to site, labour charges, hire and labour for scaffolding, curing etc complete					
a	Upto floor V level	cum	40.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
b	Floor VI & VII	cum	10.00			
	TOTAL FOR SUB HEAD 4.00 - MASONRY WORKS					
5.00	SUB HEAD 5.00 - JOINERY WORKS					
5.01	Providing and fixing in position powder coated Single leaf fully glazed Aluminium framed doors using HINDALCO 9223,9222,9202,9201,9200 ,4682 using 5mm thick toughened glass, as per architect's details, fabricated out of extruded sections confirming to BIS IS 733 as detailed in the drawing of specified size and shape of approved shade, powder coating minimum 50 micron of approved shade, including supplying and fixing necessary holdfasts / screws for fixing, cleats, 12mm diameter tie rods both at top and	sqm	70.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	bottom camium coated screws, powder coated aluminium handles of approved shape, size and finish, for each leaf on both the sides, tower bolt in matching finish 300mm long at the top, and 200mm long at the bottom, 125 mm SS butt hinges or pivots and all fixtures fastenings as per requirement, 5mm thick toughened glass fixed with special EPDM gasket felt and powder coated aluminium fittings, leaf mounted open door closer of DORMA TS 68 make, with all labour and materials complete as per drawings and as directed.					
5.02	Providing and fixing in position powder coated Double leaf fully glazed Aluminium framed doors using HINDALCO 9223,9222,9202,9201,9200 ,4682 using 5mm thick toughened glass, as per architect's details, fabricated out of extructed sections confirming to BIS IS 733 as detailed in the drawing of specified size and shape of approved shade, powder	sqm	70.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	coating minimum 50 micron of approved shade, including supplying and fixing necessary holdfasts / screws for fixing, cleats, 12mm diameter tie rods both at top and bottom camium coated screws, powder coated aluminium handles of approved shape, size and finish, for each leaf on both the sides, tower bolt in matching finish 300mm long at the top, and 200mm long at the bottom, 125 mm SS butt hinges or pivots and all fixtures fastenings as per requirement, 5mm thick toughened glass fixed with special EPDM gasket felt and powder coated aluminium fittings, leaf mounted open door closer of DORMA TS 68 make, with all labour and materials complete as per drawings and as directed.					
5.03	Providing and fixing in position powder coated aluminium doors - Single leaf partly glazed and partly panelled with 12mm thick prelaminated particle board flat	sqm	30.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	pressed three layer or graded wood particle board conforming to IS:12823 Grade I Type II of exterior grade with decorative lamination on both sides, using HINDALCO 9223, 9222,9202, 9201, 9200, 4682 with 5mm thick toughened glass as per architects details, fabricated out of extruded sections confirming to BIS IS 733 as detailed in the drawing of specified size and shape of approved shade, powder coating minimum 50 micron of approved shade, including supplying and fixing necessary holdfasts/CP brass and Stainless steel screws for fixing, cleats, 12mm dia tie rods both at top and bottom chromium coated screws, powder coated aluminium handles of approved shape, size and finish, for each leaf on both the sides, tower bolt in matching finish 300mmlong at the top and 200mm long at the bottom, 125mm SS butt hinges or pivots and all fixtures fastenings as per requirement, 5mm thick toughened glass fixed with					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	special EPDM gasket felt and powder coated aluminium fittings, leaf mounted open door closer of DORMA TS 68 make, with all labour and materials complete as per drawings and as directed.					
5.04	Providing and fixing in position powder coated aluminium doors - double leaf partly glazed and partly panelled with 12mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS:12823 Grade I Type II of exterior grade with decorative lamination on both sides, using HINDALCO 9223, 9222,9202, 9201, 9200, 4682 with 5mm thick toughened glass as per architects details, fabricated out of extruded sections confirming to BIS IS 733 as detailed in the drawing of specified size and shape of approved shade, powder coating minimum 50 micron of approved shade, including supplying and fixing necessary holdfasts/CP	sqm	120.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	brass and Stainless steel screws for fixing, cleats, 12mm dia tie rods both at top and bottom chromium coated screws, powder coated aluminium handles of approved shape, size and finish, for each leaf on both the sides, tower bolt in matching finish 300mmlong at the top and 200mm long at the bottom, 125mm SS butt hinges or pivots and all fixtures fastenings as per requirement, 5mm thick toughened glass fixed with special EPDM gasket felt and powder coated aluminium fittings, leaf mounted open door closer of DORMA TS 68 make, with all labour and materials complete as per drawings and as directed.					
5.05	Providing and fixing Frameless double leaf glass door using 10 mm thick toughened glass ,fitted with DORMA patch fitting of PT 1001 top pivot, PT 1020 top patch,PT 1010 bottom patch, PT 1049E lock,PT 1052E floor strike plate,EPC, BTS 75V F/S for glass door	sqm	20.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	applications.TGD,handles 32 x 600 mm (2 nos) as per specification and directions of the Engineer-in-charge.					
5.06	Providing and fixing in position frameless fixed glazing using 10mm toughened glass fitted with DORMA patch fittings as detailed in the draiwng of specified size including supplying and fixngnecessary holdfats, screws for fixing cleats, toughened glass with all labour and materials complete as per drawings and as directed.	sqm	90.00			
5.07	Providing and fixing Fiber Glass Reinforced Plastic (FRP) doors with frames of cross section 90mmx 45mm having single rebate of 32mm x 15mm to receive shutter of 30mm thickness. The laminate shall be moulded with fire resistant grade unsaturated ployster resin and chopped mat. Door frame laminated shall be 2 mm thick and shall be filled with suitable	sqm	300.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	wooden block in all the three legs. The frame shall mbe covered with fiber glass from all sides. M.S stay shall be provided at the bottom to steady the frame. And fixing the existing door frames 30mm thick Fiber Glass Reinforced Plastic (FRP) panelled door shutter of required colour and approved brand and manufacture, made with fire - retardant grade unsaturated polyester resin, moulded to 3mm thick FRP laminate for forming hollow rails and styles, with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, tower bolts, handles etc cast monolithically with 5mm thick FRP laminate for panels conforming to IS 14856, including fixing to frames and the coat shall be including all fittings, aldrops, tower bolts, handles etc complete					
5.08	Providing and fixing of Powder coated Aluminium framed glazed openable	sqm	90.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	windows of approved colour (minimum thickness of powder coating 50 microns) HINDALCO 4318, 4319, 9766, 9767, 3960 using 4 mm thick toughened glass of approved make. Sections should be compatible for single glazing using Pulse/Alualpha locking system, hooks and friction stay hinges. The gasket should be made of EPDM(Ethylene propylene dimonomer) with double gasket sealing and applying silicone sealants (GE make or wacker make) outside and acrylic sealant(sure seal make) inside.					
5.09	Providing and fixing of Powder coated Aluminium framed glazed sliding windows of approved colour (minimum thickness of powder coating 50 microns) HINDALCO 4318, 4319, 9766, 9767, 3960 using 4 mm thick toughened glass of approved make. Sections should be compatible for single glazing using Pulse/Alualpha locking system. The gasket should be made of EPDM(Ethylene propylene	sqm	75.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	dimonomer) with double gasket sealing and applying silicone sealants (GE make or wacker make) outside and acrylic sealant(sure seal make) inside.					
5.10	Providing and fixing powder coated Aluminium louvered Ventilators (minimum thickness of powder coating 50 microns) of approved colour HINDALCO 9771, with 5mm thick frosted glass of approved make for aluminium U channel louvers including necessary grooves in frames for fixing glass.	sqm	260.00			
5.11	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching	each	65.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge : With stainless steel cover plate minimum 1.25 mm thickness					
5.12	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	each	62.00			
5.13	Providing and supplying aluminium extruded tubular and other aluminium sections as per the architectural drawings and approved shop drawings, the aluminium quality as per grade 6063 T5 or T6 as per BS 1474,including	kg	9,840.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	super durable powder coating of 60-80 microns conforming to AAMA 2604 of required colour and shade as approved by the Engineer-in-Charge. (The item includes cost of material such as cleats, sleeves, screws etc. necessary for fabrication of extruded aluminium frame work. Nothing extra shall be paid on this account).					
5.14	Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including:					
	a) Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminum sections for fixing glazing panels of various thicknesses,					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)- cum-smoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation & drainage and protection against fire hazard including:					
	b) Fabricating and supplying serrated M.S. hot dip galvanised / Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimensional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/ masonry/structural steel framework of building structure using stainless steel anchor fasteners/ bolts, nylon separator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	c) Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and controlled factory /work shop environment , including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacture, as per the approved sealant design, within and all around the perimeterfor holding glass.					
	d) Providing and fixing in position flashings of solid aluminium sheet 1 mm thick and of sizes, shapes and profiles, as required as per the site conditions, to seal the gap between the building structure and all its interfaces with curtain glazing to make it watertight.					
	e) Making provision for drainage of moisture/ water that enters the curtain glazing system to make it watertight, by incorporating principles of pressure equalization, providing suitable gutter profiles at bottom (if					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	required), making necessary holes of required sizes and of required numbers etc. complete. This item includes cost of all inputs of designing, labour for fabricating and installation of aluminium grid, installation of glazed units, T&P, scaffolding and other incidental charges including wastages etc., enabling temporary structures and services, cranes or cradles etc. as described above and as specified. The item includes the cost of getting all the structural and functional design including shop drawings checked by a structural designer, dully approved by Engineer-in-charge. The item also includes the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working structural glazing as specified, cleaning and protection till the handing over of the building for occupation. In the end, the Contractor shall provide a water					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	tight structural glazing having all the performance characteristics etc. all complete as required, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineerin-Charge.					
	Note:- 1. The cost of providing extruded aluminium frames, shadow boxes, extruded aluminium section capping for fixing in the grooves of the curtain glazing and vermin proof stainless steel wire mesh shall be paid for separately under relevant items under this subhead. However, for the purpose of payment, only the actual area of structural glazing (including width of grooves) on the external face shall be measured in sqm. up to two decimalplaces.Note:-2. The following performance test are to be conducted on structural glazing system if area of structural glazing exceeds 2500 Sqm from the certified laboratories accredited by NABL(National Accreditation Board for					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Testing and Calibration Laboratories), Department of Science & Technologies, India. Cost of testing is payable separately. The NIT approving authority will decide the necessity of testing on the basis of cost of the work, cost of the test and importance of the work. Performance Testing of Structural glazing system Tests to be conducted in the NBL Certifiedlaboratories					
	<p>1. Performance Laboratory Test for Air Leakage Test (-50pa to - 300pa) & (+50pa to +300pa) as per ASTM E-283-04 testing method for a range of testing limit 1 to 200 mVhr”</p> <p>2. Static Water Penetration Test. (50pa to 1500pa) as per ASTM E- 331-09 testing method for a range up to 2000 ml.”</p> <p>3. Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01- 05 testing method for a range upto 2000 ml”</p> <p>4. Structural Performance Deflection and deformation by static air pressure</p>	sqm	2,890.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	test (1.5 times desing wind pressure without any failure) as per ASTME-330-10 testing method for a range upto 50 mm” 5. Seismic Movement Test (upto 30 mm) as per AAMA 501.4-09 testing method for Qualitative test” Tests to be conducted on site. 6. Onsite Test for Water Leakage for a pressure range 50 kpa to 240 kpa (35psi) upto 2000ml”					
5.15	Extra for openable side / top hung vision glass panels (IGUs) including providing and supplying at site all accessories and hardwares for the openable panels as specified and of the approved make such as heavy duty stainless steel friction hinges, min 4 - point cremone locking sets with stainless steel plates, handles, buffers etc. including necessary stainless steel screws/ fasteners, nuts, bolts, washers etc. all complete as per the Architectural drawings, as per the approved shop drawings, as specified	sqm	150.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	and as directed by the Engineer-in-Charge.					
	TOTAL FOR SUB HEAD 5.00 - JOINERY WORKS					
6.00	SUB HEAD 6.00 - FINISHING WORKS					
6.01	External plastering - 18mm thick cement plaster in 2 coats under layer 12mm thick cement plaster 1:5 finished with a top layer 6mm thick cement plaster 1:5., first coat with water proofing compound with grooves and the rate shall include the cost of water proofing compound, grooves, PVC chicken mesh, moulding etc as directed by Engineer-in-charge.	sqm	22,070.00			
6.02	Internal plastering with cement mortar 1:5, 12mm thick one coat over the surfaces of cement blockwork /brick work including providing chicken wire mesh making plaster	sqm	17,190.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	grooves where ever necessary in all heights including cost and conveyance of all materials, labour charges, curing scaffolding etc complete in all floors.					
6.03	Ceiling plastering with cement mortar 1:3, 6mm thick one coat over concrete the surfaces in all heights including cost and conveyance of all materials, labour charges, curing scaffolding etc complete in all floors.	sqm	32,800.00			
6.04	Plastering with cement mortar 1:3, 12mm cement plaster finished with a floating coat of neat cement of mix in all heights including cost and conveyance of all materials, labour charges, curing scaffolding etc complete in all floors.	sqm	300.00			
6.05	Plastering inside water tank - 12 mm cement plaster finished with a floating coat of neat cement of mix : 1:4 (1 cement: 4 fine sand) including adding	sqm	630.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	necessary water proofing compound as per prescribed ratio					
6.06	Extra for providing plaster drip course / groove in plastered surface or moulding to R.C.C. projections.	Rm	280.00			
6.07	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	sqm	17,190.00			
6.08	External Painting - Finishing walls with Acrylic Smooth exterior paint of required shade: New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20kg/ 10 sqm), including cost and conveyance of all materials to site, labour charges, hire charges for scaffolding etc complete for all levels.	sqm	24,280.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
6.09	Internal Painting - Painting the interior walls with ready mix acrylic emulsion paint of approved quality 2 or more coats to smooth even finish, over a priming coat on ceiling and walls including cost and conveyance of all materials to site, labour charges, hire charges for scaffolding etc complete for all levels.	sqm	54,990.00			
6.10	Painting with 2 or more coats on new work synthetic enamel paint of approved brand and manufacture to give an even shade over a coat of ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work	sqm	40.00			
6.11	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) : Flush/ Ruled pointing	sqm	490.00			
6.12	Supplying, assembling, lowering and fixing in vertical/ horizontal position as weep holes in RCC/ RR works,	Rm	300.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer - in-charge : 100 mm nominal size dia					
6.13	Providing 50mm wide Raised Band using 12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement: 4 fine sand) :	Rm	190.00			
6.14	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	sqm	330.00			
	TOTAL FOR SUB HEAD 6.00 - FINISHING WORKS					
7.00	SUB HEAD 7.00 - STEEL WORKS					
	Providing and fixing in position	sqm				

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
7.01	collapsible steel shutters with vertical channels 20x10x2 mm and braced with flat iron diagonals 20x5 mm size, with top and bottom rail of T-iron 40x40x6 mm, with 40 mm dia steel pulleys, complete with bolts, nuts, locking arrangement, stoppers, handles, including painting 2 or more coats of synthetic enamel paint over a priming coat of approved steel primer.		20.00			
7.02	Grill work in windows/ ventilators including painting - Providing and fixing M.S. grills of required pattern in frames of doors, windows, ventilators etc. with M.S. flats, square or round bars etc. including finishing with 2 coats of synthetic enamel paint and a priming coat with approved steel primer, fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) or fixed to openings /wooden frames with rawl plugs	kg	6,540.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	screws and all necessary fixtures etc all complete					
7.03	Providing and fixing of Stainless steel balcony hand rail of 1200 mm over all height made of Stainless steel of grade 304, gauge 16. The verticals are made of 25mm dia pipe fixed at the rate of 150mm c/c using base plate of thickness 8mm and 3 nos of bolt with SS cap. Top hand rail is made of 50 dia SS pipe, 4 nos of horizontals of 20mm dia SS pipe is fixed. Individual pipe shall not be measured. The rate shall be inclusive of fixing the rail into concrete surface, with necessary hardware SS cap, grouting for the same etc complete as per the drawing enclosed.	Rm	660.00			
7.04	Providing and fixing of Stainless steel staircase hand rail of 1200 mm over all height made of Stainless steel of grade 304, gauge 16. The baluster is made of 25mm dia pipe fixed to	Rm	190.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	alternate tread using base plate of thickness 8mm and 3 nos of bolt with SS cap. Top hand rail is made of 50 dia SS pipe, 4 nos of horizontals of 20mm dia SS pipe is fixed. Individual pipe shall not be measured. The rate shall be inclusive of fixing the rail into concrete surface, with necessary hardware SS cap, grouting for the same etc complete as per the drawing enclosed.					
7.05	Structural steel works - Providing, fabricating and fixing in position MS inserts such as nosing, corner angles of columns, plates, flats, tee's, protection channels of reception dock, supports, brackets and monorails, hooks, frame around cut-out, MS pipe sleeves etc as per drawings and specifications, in true line and level including embedding the same in to the permanent works at the time of casting of RCC works or fixing with or without base plate fixed to RCC element with appropriate size	kg	200.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	expansion bolts as per design with necessary welding, grinding and painting with 2 or more coats of approved quality synthetic enamel paint over a coat of primer etc complete as directed.					
	TOTAL FOR SUB HEAD 7.00 STEEL WORKS					
8.00	SUB HEAD 8.00 - FLOORING WORKS					
8.01	Cement concrete flooring 40 mm thick with 20 mm nominal size stone aggregate 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps but including the cost for providing and fixing 4mm thick glass strips for panels etc. complete.	sqm	590.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
8.02	Industrial Vitrified tiles flooring/ skirting - Providing and laying industrial vitrified flooring and skirting at all levels in different sizes with water absorption less than 0.08% and conforming to IS : 15622, of approved make and thickness 12mm or nearest size, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), including grouting the joints with white cement, and matching pigments etc., complete.(basic cost of vitrified tile shall be Rs.900/sqm)	sqm	2,160.00			
8.03	Ceramic tile flooring - Providing and laying Ceramic glazed floor tiles of size 300x300 mm of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, and thickness 6mm to 8mm, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigment etc, complete	sqm	5,350.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	(basic cost of ceramic tile shall be rs. 450/sqm)					
8.04	Ceramic wall tile finish - Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 of approved make, in all colours, shades except burgundy, bottle green, black of any size and thickness 6mm to 8mm as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete. (basic cost of ceramic tile shall be rs. 450/sqm)	sqm	1,980.00			
8.05	Providing and fixing 18mm thick granite slab of approved colour for staircase treads (single piece) and landings, fixed with neat cement slurry over 15mm thick cement plaster 1:5 to correct level and pattern and	sqm	780.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	polishing etc complete including cost and conveyance of all materials and labour charges etc complete in all floors (basic rate of granite Rs. 2500 /sqm)					
8.06	Granite stone wall cladding work with 18mm thick (mirror polished and machine cut edge) of any colour and shade upto 10 m height with special adhesive over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand), including pointing in white cement with an admixture of pigment to match the stone shade.(basic rate of granite Rs. 2500 /sqm)	sqm	700.00			
8.07	Providing and fixing 18 mm thick granite slab gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters , window sills , facias and similar locations of required size, approved shade, colour	sqm	30.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish, cutting openings wherever required etc. complete at all levels.(basic rate of granite Rs. 2500 /sqm)					
8.08	Providing edge moulding to staircase steps and lift wall cladding 18mm thick granite stone works including machine polishing to edge to give high gloss finish etc. complete as per design approved by engineer in charge at all levels.	Rm	810.00			
	TOTAL FOR SUB HEAD 8.00 FLOORING WORKS					
9.00	SUB HEAD 9.00 - ROOFING WORKS					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
9.01	Providing screed concrete over terrace for an average thickness of 75mm to the required slope, using 1:2:4 using 20mm and 6mm (nominal size) broken stone and 125 gm of Recon 35 fibre per 50 kg of cement laid to slope including cost and conveyance of all materials and labour charges, curing, steel trowelled to smooth finish and threading at 45x45 sqm etc complete in terrace floor.	cum	460.00			
9.02	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	each	25.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	TOTAL FOR SUB HEAD 9.00 - ROOFING WORKS					
10.00	SUB HEAD 10.00 - FALSE CEILING WORKS					
10.01	Providing and fixing powder coated aluminium work (minimum thickness of powder coating 50 micron) consisting of tee/ angle sections, of approved make conforming to IS : 733 in frames of false ceiling including aluminium angle cleats with necessary C.P. brass/ stainless steel sunk screws, aluminium perimeter angles fixed to wall with stainless steel rawl plugs @ 450 mm centre to centre and fixing the frame work to G.I. level adjusting hangers 6 mm dia. with necessary cadmium plated machine screws, level adjusting hangers, ceiling cleats and expansion hold fasteners, etc complete as per approved architectural drawings and direction of the Engineer-in-charge	kg	8,460.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
10.02	<p>Providing and fixing false ceiling with 12 mm thick plain/ semi perforated or with design ceiling tiles of BWP type phenol formaldehyde synthetic resin bonded pressed particle board conforming to IS:3087, finished with a coat of aluminium primer on both sides & edges, including two coats of synthetic enamel paint of approved quality on exposed face, fixed to a grid made out of anodised aluminium (with 15 micron anodic coating) Tsections 35 x15x1.5 mm size main runners, cross runners 23.5x19x1.5 mm fixed to main runners placed 600 mm centre to centre both ways so as to form a grid of 600 mm square. The frame work shall be suspended from ceiling by level adjusting hangers of 6 mm dia M.S rod fixed to roof slab by means of ceiling cleats and dash fastener. The suspenders shall be placed 600 x 1200 mm centre to centre including fixing to the frame with C.P brass screws and applying a</p>	sqm	940.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	priming coat of zinc chromate yellow primer					
	TOTAL FOR SUB HEAD 10.00 FALSE CEILING WORKS					
11.00	SUB HEAD 11.00 - ROAD WORKS					
11.01	Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).	cum	129.00			
11.02	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve	cum	1,950.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	the desired density, complete as per specifications and directions of Engineerin -Charge : With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30					
11.03	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to wet mix macadam (WMM) specification including premixing the material with water at OMC in for all leads & lifts, laying in uniform layers with mechanical paverfinisher in sub-base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achievethe desired density, complete as per specifications and directions of Engineer-in-Charge.	cum	3,245.00			
11.04	Supplying and fixing C.I. cover with frame for manholes : 560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than	each	11.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	108 kg and weight of frame not less than 100 kg.					
11.05	Supplying and fixing C.I. cover with frame for manholes : 500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58kg and weight of frame not less than 58kg.	each	26.00			
	TOTAL FOR SUB HEAD 11.00 - ROAD WORKS					
	TOTAL FOR CIVIL WORKS - PART A					
PART B - WATER SUPPLY AND SANITARY WORKS						
A	SANITARY FIXTURES, BATH FITTINGS AND ACCESSORIES					
	Sanitary Fixtures and Tap Fittings required shall be IGBC Rated, as detailed below. The contractor has to arrange Certificate for IGBC					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Rating for Sanitary Fixtures and Tap Fittings, from concerned the manufacturers and submit to the Engineer - in - Charge for approval					
1	Providing and fixing IGBC /Green Rated white vitreous china Extended Wall Mounted EWC, Complete Set with 2/4 LPF Dual Cistern, overall size 760 x 375 x 660mm. or as per approved model and shape, including Cistern Fittings, Soft Close Seat Cover, bolts, nuts, washers, expansion/ rawl sleeves, gasket etc. complete, and fixing to wall, as per manufacturer's instruction and to the approval of Engineer-in-charge.	Set	168.00			
2	Providing and fixing Disabled Toilet, Complete Set , including White Floor Mounted Water Closet, Plastic Cistern, Lid, Antimicrobial Seat Cover etc, Wash Basin, Faucet/ Tap with spatula lever and with 1 Set of Hinged Arm, 760mm. long, 4 Set of Grab Rail, each of 600mm. long, and with all necessary accessories and fixed with	Set	4.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Brackets Expansion/ Rawl Sleeves, Stainless Steel/ Brass Bolts/Screws, Nuts, Washers etc, including cutting and making good the walls and floors wherever required. including, all as per manufacturer's instructions and to the approval of Engineer-in-charge.					
3	Providing and fixing white vitreous china IGBC /Green Rated Urinal, of approved shape and size, with Integral P-Trap and with Integrated Electronic Flushing System with Passive and Extra Sensitive Infra Red Sensor (Battery / AC Operated, as per final requirement), overall size: 610 x 390 x 370mm, with a Total Flushing Rate of 0.60 LPF , having pre & post flushing with water, (250 ml & 350 ml respectively), and with water inlet from back side, outlet to wall, including fixing to wall with suitable brackets, all as per manufacturer's instruction and direction of Engineer-in-charge.	Set	88.00			
4	Providing and fixing White Vitreous China Counter Top / Bottom	Nos.	160.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Lavatory, 410 x 560 mm or equal, compatible for a washing rate of 6 LPM or less, including 32mm. CP Waste Coupling, C.P. Brass Chain with rubber plug, and fixing to counter with suitable fixtures, all as per manufacturer's instruction and the direction of Engineer-in-charge.					
5	Providing and fixing Stainless Steel A ISI 304 (18/8) Kitchen Sink with Drain Board, as per IS: 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required : 510x1040 mm bowl depth 250 mm. (For Kitchen, Provisional Item only)	Set	3.00			
6	Providing and fixing IGBC /Green Rated, 15mm. CP Pillar Tap, Self Closing Type with Pre Set time 5 to 6 Sec, with a controlled flow rate of 6 LPM or less, (overall dimensions:110x120mm. or equal) for Wash Basin, including all necessary accessories, all as per manufacturer's instructions and to the approval of the	Set	164.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Engineer-in-charge.					
7	Providing and fixing IGBC /Green Rated Kitchen Sink Mixer , Table Mounted Type with a controlled flow rate of 6 LPM , 15mm. nominal bore, overall dimensions: 208x237mm, including a pair of 15mm. braided flexible connectors and all necessary accessories, all as per manufacturer's instructions and to the approval of the Engineer-in-charge. <i>(For Kitchen, Provisional Item only)</i>	Set	3.00			
8	Providing and fixing IGBC /Green Rated CP Long Body Tap , with a controlled flow rate of 6 LPM , 15mm. nominal bore, 185mm. long for Toilets, with wall flanges and all other necessary accessories, all as per manufacturer's instructions and to the approval of the Engineer-in-charge. <i>(Optional only)</i>	Set	168.00			
9	Providing and fixing IGBC /Green Rated CP Long Body Tap , with a controlled flow rate of 6 LPM , 15mm. nominal bore, 185mm. long for Kitchen, with wall flanges and all	Set	3.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	other necessary accessories, all as per manufacturer's instructions and to the approval of the Engineer-in-charge. <i>(Optional only)</i>					
10	Providing and fixing IGBC /Green Rated Health Faucet , with a controlled flow rate of 6 LPM or less with 15mm. CP Braided Hose, Hook and all other necessary accessories, all as per manufacturer's instructions and to the approval of the Engineer-in-charge.	Set	172.00			
11	Providing and fixing C. P. Brass Angle Valve for Wash Basin & Kitchen Sink Mixer and Geyser points of approved quality conforming to IS:8931 (a) 15 mm nominal bore.	Nos.	516.00			
12	Providing and Fixing CP ABS body P-Trap 32mm. for Wash Basins with threaded union connections, wall flanges and all other necessary accessories, all as per manufacturer's instructions and to the approval of the Engineer-in-charge. <i>(Optional Item)</i>	Set	164.00			
13	Providing and Fixing CP ABS body P-	Set	3.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Trap 40mm. for Kitchen Sink with threaded union connections, wall flanges and all other necessary accessories, all as per manufacturer's instructions and to the approval of the Engineer-in-charge. (Optional Item)					
14	Providing and fixing Heavy Duty Flexible Braided Connectors, 15mm. nominal bore, with higher thermal stability for cod and water, for Wash Basin & Kitchen Sink Mixer and Geyser points, of approved quality.	Nos.	340.00			
15	Providing and fixing following C. P. Bath Room/Toilet Fittings/Accessories, including cutting and making good the walls and floors, wherever required. Quantities are tentative only and shall change as per final architectural/interior design/ requirement.					
i	CP Towel Rail, 600mm. Long x 80mm. High	Set	27.00			
ii	C. P. Toilet Paper Holder, approved quality.	Set	172.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
iii	C. P. Robe Hook, 60mm. Dia. x 45mm.high, with concealed fittings arrangement, of approved quality. (Optional)	Nos.	172.00			
iv	C. P. Towel Ring, rectangular shape 160 x 210mm. 45 mm high with concealed fittings arrangement of approved quality.	Set	6.00			
v	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	Set	30.00			
vi	Providing and fixing 600 x 450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	Nos.	30.00			
	TOTAL FOR SANITARY FIXTURES AND ACCESSORIES					
B	SOIL, WASTE AND VENT SYSTEMS					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
1	PIPE WORK CONCEALED IN WALLS AND CEILING VOID					
1	Providing and fixing, water test and commission Drainage Pipe Work with uPVC Pipes 6Kg/Cm ² (IS: 4985) and injection moulded PVC fittings (IS: 7834) such as bends, tees, couplers, Y-junctions, reducers, adaptors, sockets, end plugs etc. jointed with solvent cement and fixing in position with clamps, hanging supports, fasteners, masonry supports etc, as per requirement, including cutting, chasing, drilling etc, in Block Walls etc. wherever required and making good walls, floors, duct etc. Core Cutting in RCC Structure shall measured separately.					
i	50 mm. O.D.	Mtr.	415.00			
ii	63 mm. O.D.	Mtr.	358.00			
2	Providing and Fixing, water test and commission Drainage Pipe Work with uPVC SWR Pipes (IS 13592) Type - B, solvent cement welded type, and SWR solvent cement welded type fittings					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	such as bends, tees, couplers, Y-junctions, reducers, adaptors, sockets, end plugs etc. jointed with solvent cement and fixing in position with clamps, hanging supports, fasteners, masonry supports etc, as per requirement, including cutting, chasing, drilling etc, in Block Walls etc. wherever required and making good walls, floors, duct etc. Core Cutting In RCC Structure shall measured separately.					
i	75mm. O.D.	Mtr.	768.00			
ii	110mm. O.D.	Mtr.	994.00			
II	PIPE WORK IN VERTICAL SHAFTS					
1	Providing and Fixing, water test and commission Drainage Vertical Stacks with uPVC SWR Pipes (IS 13592) Type - B, and Rubber Ring Seal (IS 5382) moulded PVC fittings (IS 14735) such as bends, tees, couplers, Y-junctions, reducers, adaptors, sockets, end plugs etc. jointed and fixing in position with approved G.I. Supporting Systems consisting of slotted rails, clamps,					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	fasteners, hanging rods, bolts nuts etc, as per requirement, including cutting, chasing, drilling etc, in Block Walls etc, wherever required and making good walls, floors, duct etc. Core Cutting in RCC Structure shall measured separately.					
i	75mm. O.D.	Mtr.	Unit Rate			
ii	110mm. O.D.	Mtr.	114.00			
2	Providing and Fixing, water test and commission Vent Pipes in Vertical Stacks with uPVC SWR Pipes (IS 13592) Type-A, and Rubber Ring Seal (IS 5382) moulded PVC fittings (IS 14735) such as bends, tees, couplers, Y-junctions, reducers, adaptors, sockets, end plugs etc. jointed and fixing in position with approved G.I. Supporting Systems consisting of slotted rails, clamps, fasteners, hanging rods, bolts nuts etc, as per requirement, including cutting, chasing, drilling etc, in Block Walls etc, wherever required and making good walls, floors, duct etc. Core					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Cutting in RCC Structure shall measured separately.					
i	75mm. O.D.	Mtr.	Unit Rate			
ii	110mm. O.D.	Mtr.	168.00			
III	FLOOR TRAPS AND ACCESSORIES					
1	Providing and Fixing uPVC Floor Traps with deep seal including all inlet and outlet connections to pipes using solvent cement, complete.	Set	307.00			
2	Providing and Fixing Stainless Steel Gratings and Cockroach Trap, from for Floor Traps.	Set	271.00			
3	Providing and Fixing Heavy Duty Stainless Steel Cover, for Concealed Floor Traps.	Set	36.00			
4	Providing and Fixing Floor Clean Out with Heavy Duty, Stainless Steel, sealed, threaded covers, including suitable insert keys for opening, if required.	Set	37.00			
5	Fabrication, supply and installation of Floor Trap for Kitchen / Canteen, with slotted gratings, trap, strainer, tail end etc, fabricated from 16gauge Stainless Steel, Grade-304, as per	Set	4.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	specification and requirement and to the approval of engineer - in charge. Clear Opening: 300 x 300mm. (For Canteen. Optional Only. Budget Price)					
6	Providing and Fixing Cover for Drainage Channel in Kitchen with Light Duty Ductile Iron Grating, Internal size 300mm. x 600mm. Long. (Optional Item only. Budget Price)	Nos.	10.00			
	TOTAL FOR SOIL, WASTE AND VENT SYSTEMS					
C	RAIN WATER SYSTEM					
I	DOWN TAKE PIPES					
	The Sizing of Rain Water Pipes and quantities for the same in this section are approximate only and shall vary as per final requirement and site conditions.					
1	Providing and Fixing, water test and commission Rain Water Pipe Work with uPVC SWR Pipes (IS 13592) Type - A, and Rubber Ring Seal (IS 5382) moulded PVC fittings (IS 14735) such as bends, tees, couplers, Y-Joints,					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	reducers, adaptors, sockets, end plugs etc. jointed and fixing in ducts with approved G.I. Supporting Systems consisting of slotted rails, legs, clamps, fasteners, bolts nuts etc, as per requirement, including cutting, chasing, drilling etc, in Block Walls etc, wherever required and making good walls, floors, duct etc. Core Cutting in RCC Structure shall measured separately.					
i	110mm. O.D. Down Pipe	Mtr.	260.00			
i	110mm. O.D. Down Pipe	Mtr.	216.00			
2	Providing and Fixing, water test and commission Rain Water Exposed Horizontal Pipe Work with uPVC Pipes 6Kg/Cm ² (IS: 4985) and injection moulded PVC fittings (IS: 7834) such as bends, tees, couplers, Y-junctions, reducers, adaptors, sockets, end plugs etc. jointed with solvent cement and fixing in position with clamps, hanging supports, fasteners, masonry supports etc, as per requirement, including cutting, chasing, drilling etc, in Block					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Walls etc. wherever required and making good walls, floors, duct etc. Core Cutting In RCC Structure shall measured separately.					
i	110mm. O.D.	Mtr.	48.00			
ii	160mm. O.D.	Mtr.	120.00			
	Underground Pipe Work for Rain Water System shall be counted separately in the Section External Work					
3	Supply, fix at site in position, Rain Khurra (Rain Water Outlet) in Cast Iron cum Aluminium Construction, complete with Gratings, suitable for 110mm. of down pipes.	No.	43.00			
	TOTAL FOR RAIN WATER HARVESTING SYSTEM					
D	COLD WATER SUPPLY SYSTEM					
I	CONCEALED PIPE WORK					
	Providing, fixing, pressure testing and commission Concealed Cold Water Services Pipe Work, with High Pressure uPVC Pipes, Sch. 40 (ASTM D 1785) and Sch. 80 (ASTM D 2467)					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Fittings, including all required uPVC plain & brass threaded fittings and fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step solvent cement for pressure pipes and fittings, and the cost of cutting chases and making good the same as per direction of Engineer- in -Charge.					
i	15 mm. dia. (1/2").	Mtrs.	407.00			
ii	20 mm. dia. (3/4").	Mtrs.	1479.00			
iii	25 mm. dia. (1")	Mtrs.	84.00			
iv	32 mm. dia. (1 1/4")	Mtrs.	12.00			
II	EXPOSED PIPE WORK -IN CEILING VOID, VERTICAL STACKS AND ROOF					
	Providing, fixing, pressure test and commission Exposed Cold Water Services Pipe Work, with High Pressure uPVC Pipes, Sch. 40 (ASTM D 1785) and Sch. 80 (ASTM D 2467) Fittings, including fixing the pipe with clamps at required spacing (as per					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	manufacturer's instructions). This includes jointing of pipes & fittings with one step solvent cement for pressure pipes and fittings, including testing of joints complete as per direction of Engineer in Charge.					
i	20 mm. dia. (3/4")	Mtrs.	364.00			
ii	25 mm. dia. (1")	Mtrs.	244.00			
iii	32 mm. dia. (1 1/4")	Mtrs.	326.00			
iv	40 mm. dia. (1 1/2")	Mtrs.	118.00			
v	50 mm. dia. (2")	Mtrs.	218.00			
vi	62.5 mm. dia. (2 1/2":)	Mtrs.	318.00			
III	VALVES AND ACCESSORIES					
1	Providing and fixing Brass Stop Cock (Item can be Forged Brass Ball Valves, as per final requirement) of approved quality :					
i	15mm.	Nos.	96.00			
ii	20mm.	Nos.	4.00			
2	Providing and fixing Gun Metal Gate					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Valve with C.I. wheel of approved (screwed end), complete with all necessary accessories. (Item can be Forged Brass Ball Valves, as per final requirement of approved quality and brand)					
i	25mm.	Nos.	Unit Rate			
ii	32mm.	Nos.	38.00			
iii	40mm.	Nos.	12.00			
iv	50mm.	Nos.	5.00			
v	65mm.	Nos.	7.00			
3	Providing and Fixing Butterfly Valve, PN-16 , slim seal, standard lever operated type confirming to BIS: 5155 with IS: 13095 Mark , slim seal standard lever operated type confirming with required flanges, nuts, bolts etc. complete.					
i	65mm. PN-16	Nos.	7.00			
ii	80mm. PN-16	Nos.	3.00			
iii	100mm. PN-16	Nos.	Unit Rate			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
4	Providing and fixing C.I. Sluice Valve, PN-16, with IS: 14846 Mark, with required flanges, rubber insertions, bolts, nuts, Washers etc. complete.					
i	100mm. PN-16	Nos.	1.00			
5	Providing and fixing Gun Metal non-return valve of approved quality (screwed end), all as per Tender / Technical Specifications					
i	65 mm. Vertical.	Nos.	6.00			
6	Providing and Fixing Y-Strainer with Gun Metal Body and S.S. Screen, flanged end, complete set, all as per Tender / Technical Specifications					
i	65mm.	Nos.	3.00			
7	Providing and Fixing Ball Type Foot Valve. PN 10, with Cast Iron Body Nitrile Reinforced Ball, Screwed End, required in the Suction Lines of for Water Transfer and Distribution Pumps. (Optional Item; if negative suction is only possible, as per final site conditions). All as per Tender / Technical Specifications					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
i	65mm.	Set	3.00			
ii	80mm.	Set	3.00			
8	Providing and Fixing Heavy Duty Bronze Float Valve with ABS Float, 25 Bar Rating, Screwed End, complete, all as per Tender / Technical Specifications.					
i	50mm. (Optional only)	Set	2.00			
ii	65mm.	Set	1.00			
9	Providing and Fixing, test and commission, approved Brand Pressure Reducing Station complete with GM Pressure Reducing Valves, Pressure Gauges with siphon connections on upstream and down stream etc. Complete set.					
i	32mm. (Optional Item; depending on final selection of Water Efficient Sanitary Fixtures and Faucets.	Set	2.00			
ii	40mm. (Optional Item; depending on final selection of Water Efficient Sanitary Fixtures and Faucets.	Set	2.00			
iii	65mm. in Water Inlet, from External	Set	2.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Water Supply network. (Optional Item; depending on final pressure in the Water Supply Network proposed for the premises.)					
10	Providing and Fixing, test and commission 20mm. (3.4") Air Release Valve.	Nos.	9.00			
	TOTAL FOR COLD WATER SUPPLY SYSTEM					
E	COLD WATER PUMPS AND ACCESSORIES					
	TREATED WATER TRANSFER PUMP SET					
1	Providing, Fixing, Testing and Commission Hydro Pneumatic, Water Transfer Pumping System with Factory Assembled Packaged Pump Set , complete with One Working, One Assist and 1 Stand by pumps, each of Capacity: 10M3 / Hr. @ 50 Mtr. Head, 2.2kW, 3Ph, complete with VFD Drive, Automatic microprocessor based Control Panel, Suction & Delivery Manifolds, Control Valves, Pressure Gauge, Pressure Switch etc. 200Ltr.	Set.	1.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Diaphragm Pressure Vessel etc, all a on common frame. The price is inclusive of all connected electrical work.					
	The head proposed for the pump (each) is tentative only and shall change as per final location of Water Pump Room					
	RAW / FLUSING WATER DISTRIBUTION PUMP SET					
2	Providing, Fixing, Testing and Commission Hydro Pneumatic, Pressure Booster Water Distribution System with Factory Assembled Packaged Pump Set , complete with One Working, One Assist and 1 Stand by pumps, each of Capacity: 20M3 / Hr. @ 55 Mtr. Head, 5.5 kW, 3Ph, complete with VFD Drive, Automatic microprocessor based Control Panel, Suction & Delivery Manifolds, Control Valves, Pressure Gauge, Pressure Switch etc. 200Ltr. Diaphragm Pressure Vessel etc, all a on common frame. The price is inclusive of all connected electrical work.	Set.	1.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	The head proposed for the pump (each) is tentative only and shall change as per final location of Water Pump Room					
	AUTOMATIC LEVEL CONTROL SYSTEM					
3	Providing, Fixing, testing and commission, Automatic Level Control System for automatically controlling the domestic water distribution network system, between under ground water tank and overhead water tank. The contractor has to design the network in consultation with the system consultant. The tailor made system shall be from approved manufacturers. The price shall be inclusive of all connected cable work.	Set.	1.00			
	TOTAL FOR WATER TRANSFER PUMPS AND ACCESSORIES					
F	HOT WATER SUPPLY SYSTEM					
	PROVISIONAL ITEM FOR KITCHEN					
	PIPE WORK					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for Hot Water Supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.					
	All Hot Water pipe work, including concealed pipe work in wall, need Thermal Insulation, Hence Cost for thermal Insulation, with flexible elastomeric closed cell, to be added with DSR rates. Hence Final Unit Rate shall be as per Cost Analysis.					
1	20 mm. dia. (3/4") Concealed in Wall (Tentative Quantity)	Mtrs.	24.00			
2	20 mm. dia. (3/4") Exposed (Tentative Quantity)	Mtrs.	12.00			
	22 mm. dia. (3/4") Exposed (Tentative Quantity)	Mtrs.	6.00			
3	Supply, installation test and	Set.	1.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	commission Electric Water Heater, as per specification. 50 Ltr. Capacity.					
	TOTAL FOR HOT WATER SYSTEM					
G	EXTERNAL WORK					
	All quantities in this section are approximate only and shall vary as per final requirement and site conditions.					
1	EXTERNAL (UNDER GROUND) SOIL, WASTE & VENT SYSTEM					
i	UNDER GROUND SOIL, WASTE & VENT PIPE WORK.					
	Providing, fixing, water test and commission Under Ground Drainage Pipe Work with uPVC Pipes 6Kg/Cm2 (IS: 4985) jointed and laid in trenches with required slopes, as specified, and kept in position with masonry supports, thrust blocks, anchors etc.					
a	110mm. O.D.	Mtr.	228.00			
b	160mm. O.D.	Mtr.	172.00			
c	200mm. O. D.	Mtr.	260.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
ii	Excavating trenches of required width for pipes, including excavation for sockets, depth up to 1.5 m, including getting out the excavated materials, returning the soil as required in layers not exceeding 20 cm in depth, including consolidating each deposited layers by ramming, watering etc., stacking serviceable material for measurements and disposal of unserviceable material as directed, within a lead of 50 m :					
	In all kinds of Soil					
a	Pipes exceeding 80mm. dia. but not exceeding 300 mm dia.	Mtr.	440.00			
	Extra for excavating trenches for pipes above 80mm. Bit not exceeding 300mm.. in all kinds of soil for depth exceeding 1.5 m, but not exceeding 3 m. (Rate is over corresponding basic item for depth up to 1.5 metre).					
b	Pipes exceeding 80mm. dia. but not exceeding 300 mm dia, depth up to 1.5 Mtr.	Mtr.	220.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
iii	Providing and Filling sand, free of stones and other objects, as bed for under ground uPVC pipes, and providing sand cover all around the pipes to a minimum coverage of 150mm. This quantity is estimated as per preliminary design and shall change as per final requirement and site conditions	M3	167.00			
iv	Providing and laying cement concrete 1:5:10 (1 cement: 5 fine sand: 10 graded stone aggregate 40 mm nominal size) around under ground UPVC pipes, as encasement, to a minimum covering of 10cm thick. Quantity shall as per initial estimation and shall change as per final requirement and site conditions	M3	35.00			
v	Supply, fix at site in position, test and commission PVC P - Trap, 110mm, as Gully Trap, including all inlet and outlet connections to pipes using solvent cement/ring seal joints,	Set	5.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	complete and placed inside masonry chamber. (Construction of Gully Trap Chambers shall measured separately under)					
vi	Constructing Brick Masonry Rectangular Chambers, for above Square Gully Traps, 30x30cm. internal size and depth up to 75cm. with 75 class designation brick wall, 115mm. thick in cement mortar 1:5 on a foundation of P.C.C. 1:4:8, 10cm. thick, inside and outside cement plaster 1:3, 12 mm thick with a neat cement flushing coat, surrounding the installed gully trap with P.C.C. 1:1.5:3, including curing, fixing 10x10cm. C.I. grating and 30x30cm. Heavy Duty Double Sealed, Air Tight, Cast Iron Cover and Frame, the weight of cover to be not less than 13.0Kg, over the chamber including cost of materials and excavation, refilling, compaction etc.	Set	5.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
vii	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 B994 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :					
a	0.91 m deep with Heavy Duty Cast Iron cover and frame 560 mm internal diameter conforming to I.S. 1726, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg), fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded	Nos.	4.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :					
b	Depth up to 1,67 Mtr. with Heavy Duty Cast Iron cover and frame 560 mm internal diameter conforming to I.S. 1726, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg), fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :	Nos.	16.00			
viii	Providing and Fixing Solid Interceptor, a complete set, for removing solids in Kitchen Waste Water and shall act as an integral part of Oil / Grease interceptor, proposed for the Kitchen,	set	1.00			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	The Equipment shall be suitable for high flow rate up to 3.2 LPS and all technical details shall be.as per the Tender Specifications. The equipment shall be of Approved Make and Model.					
ix	Providing and Fixing Oil / Grease Interceptor, a complete set, for removing oil and grease in Kitchen Waste Water and shall be with Flow Rate of 3 LPS (maximum, the flow rate shall change as per final design and requirement of Kitchen). All technical details shall be.as per the Tender Specifications. The equipment shall be of Approved Make and Model.	set	1.00			
2	EXTERNAL WATER SUPPLY SYSTEM					
	UNDER GROUND PIPE WORK.					
i	Providing, fixing, pressure test and commission Under Ground Under Ground Cold Water Services Pipe Work, with High Pressure uPVC Pipes, Sch. 80 (ASTM D 1785) and high pressure fittings, Sch. 40 (ASTM D 2467) such as bend, tees, couplers,					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	reducers, unions, flanges, male and female threaded couplings, adaptors, sockets, end plugs etc. jointed with solvent cement for pressure pipes & fittings and laid in trenches, as specified, and kept in position with masonry supports, thrust blocks, anchors etc.					
a	65mm. Dia.	Mtr.	360.00			
b	80mm. Dia.	Mtr.	30.00			
c	100mm. Dia.	Mtr.	170.00			
ii	Excavating trenches of required width for pipes, including excavation for sockets, depth up to 1.5 m, including getting out the excavated materials, returning the soil as required in layers not exceeding 20 cm in depth, including consolidating each deposited layers by ramming, watering etc., stacking serviceable material for measurements and disposal of unserviceable material as directed, within a lead of 50 m :					
	In all kinds of Soil					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
a	Pipes not exceeding 80mm. dia.	Mtr.	390.00			
b	Pipes exceeding 80mm. dia. but not exceeding 300 mm dia.	Mtr.	170.00			
iii	Providing and Fixing Approved Make and Model Back Flow Preventing Devise, for overflow line for underground water tank 100/110mm.	set	1.00			
iv	Supply, installation, testing and commission of Water Flow Meter as per IS: 2373 and tested by Municipal Board and to the approval of Kerala Water Authority, complete with bolts, nuts, rubber insertions etc. and all necessary accessories etc. (The tail pieces if required will be paid separately).					
i	Suitable for 65mm (2 1/2 ") Water Supply Inlet.	Set	1.00			
v	Constructing masonry Valve Chamber in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice / gate valve, including all supports for fixing valve, with Heavy Duty C.I. cover and frame, i/c necessary					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design					
	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5					
a	Internal Size: 60 x 60 x 75cm, deep	No.	4.00			
b	Internal Size: 90 x 90 x 100cm, deep	No.	4.00			
vi	Constructing masonry Water Metter Chamber in brick work in cement mortar 1:4 (1 cement : 4 coarse sand), including all supports for fixing Water Meter, with Heavy Duty C.I. cover and frame, i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand: 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	thick, finished with a floating coat of neat cement complete as per standard design					
	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5					
a	Internal Size: 60 x 60 x 75cm, deep	No.	1.00			
	TOTAL FOR EXTERNAL WORK					
H	MISCELLANEOUS ITEMS					
	Providing and fixing Puddle Flanges for Water Tanks etc, fabricated from uPVC Pipes Sch. 80 (ASTM D 1785).					
i	50dia.	Nos.	3.00			
ii	65dia.	Nos.	4.00			
iii	80dia.	Nos.	8.00			
iv	100dia.	Nos.	2.00			
3	Core drilling for following sizes of Pipes, in following RCC Structures, including grouting the holes with GP2 Conbextra or approved equal. (Since the number of core drills required shall vary considerably as per site					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	conditions, the quantity of this item can't be estimated now. Hence the unit rates.)					
	In floor/roof slab, thickness 14mm. (approx.)					
i	50mm. O.D.		Rate only			
ii	63mm. O.D.		Rate only			
iii	75mm. O.D.		Rate only			
iv	110mm. O.D.		Rate only			
v	160mm. O.D.		Rate only			
	In RCC Beams, thickness 30mm. (approx.)					
i	50mm. O.D.		Rate only			
ii	63mm. O.D.		Rate only			
iii	75mm. O.D.		Rate only			
iv	110mm. O.D.		Rate only			
v	160mm. O.D.		Rate only			
	TOTAL FOR MISCELLANEOUS ITEMS					
	TOTAL FOR WATER SUPPLY AND SANITARY WORKS - PART B					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
PART C - ELECTRICAL WORKS						
1	RECEIVING END SUB STATION					
1.1	Supply at site and Installation completely testing and commissioning of one number indoor type HT, 5 Panel set consisting five number 11 KV, 26.3 KA, 800A VCB, electrically operated spring mechanism, draw out type with overcurrent & earth fault relay, one for incomer and four numbers for out going, extensible for adding feeders if required. The panel should have provision for XLPE Cable connection, and should have suitable ratings and HT TOD metering facilities with provision for CT and PT in complete.	No	1			
1.2	S.I.T.C of OUTDOOR type 500kVA, 11/0.433kV oil cooled COPPER WOUND transformer including all accessories. The degree of protection shall be suitable for outdoor application. The transformer shall be designed to suit	Set	3			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	<p>design temperature of 50deg. The Py voltage shall be varied by OFF LOAD Tap Changer, the tap shall be of 7 steps. The primary shall be suitable for 1 run 3C x 150Sqmm 11kV Al, Ar cable and Secondary shall be suitable for 4runs of 3.5Cx240sqmm cable. All standard accessories shall be provided like, name plated with tech details, lifting hooks, jacking pads, breather, bidirectional rollers, winding temperature indicators, relays, alarm and trip contacts etc., Painting shall be carried out as per IS, shade is 631, impedance of the transformer shall be as per IS. The equipment shall satisfy Indian standards, local governing authorities, fire etc., Rate shall be for the complete Transformer with connected civil works etc. The contractor to submit vendor's general arrangement & scheme drawings and approval & manufacturing clearance to be obtained for engineer in-charge. All civil works under civil contractor scope.</p>					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
1.3	S.I.T.C of suitable for OUTDOOR type 160kVA, 11/0.433kV oil cooled COPPER WOUND transformer including all accessories. The degree of protection shall be suitable for outdoor application. The transformer shall be designed to suit design temperature of 50deg. The Py voltage shall be varied by OFF LOAD Tap Changer, the tap shall be of 7 steps. The primary shall be suitable for 1 run 3C x 150Sqmm 11kV Al, Ar cable and Secondary shall be suitable for 1Rx3.5Cx185sqmm cable. All standard accessories shall be provided like, name plated with tech details, lifting hooks, jacking pads, breather, bidirectional rollers, winding temperature indicators, relays, alarm and trip contacts etc., Painting shall be carried out as per IS, shade is 631, impedance of the transformer shall be as per IS. The equipment shall satisfy Indian standards, local governing authorities, fire etc., Rate shall be for the complete Transformer with	Set	1			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	connected civil works etc. The contractor to submit vendor's general arrangement & scheme drawings and approval & manufacturing clearance to be obtained for engineer in-charge. All civil works under civil contractor scope.					
2	CABLE LAYING AND TERMINATION					
	Supplying of XLPE insulated, heavy duty, aluminium conductor. 11KV grade armored. MV cable of the following sizes as required, generally conforming to IS:1554/Part-I/1970					
2.1	11kV Grade, 3Cx300Sqmm Ar, Al.	Meters	125			
2.2	11kV Grade, 3Cx150Sqmm Ar, Al.	Meters	250			
2.3	11kV Grade, 3Cx185Sqmm Ar, Al.	Meters	UR			
	Supply, installation, testing and commissioning of Cable End termination for following size XLPE complete, double compression gland for indoor type and Heat shrinkable termination kit for outdoor type					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
2.4	11 KV (E) grade, 3 core 300 sqmm XLPE cable with Heat shrinkable termination kit (outdoor type)	Each	1			
2.5	11 KV (E) grade, 3 core 150 sqmm XLPE cable with Heat shrinkable termination kit (outdoor type)	Each	4			
2.5.1	11 KV (E) grade, 3 core 185 sqmm XLPE cable with Heat shrinkable termination kit (outdoor type)	Each	UR			
2.6	11 KV (E) grade, 3 core 300 sqmm XLPE cable with double compression gland (Indoor type)	Each	1			
2.7	11 KV (E) grade, 3 core 150 sqmm XLPE cable with double compression gland (Indoor type)	Each	4			
2.7.1	11 KV (E) grade, 3 core 185 sqmm XLPE cable with double compression gland (Indoor type)	Each	UR			
2.8	Laying of one number XLPE power cable of 11KV grade of following size direct in ground including excavation,sand cushioning,protective covering and refilling the trench etc. as required					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
2.8.1	Above 120sq.mm and upto 400sq.mm	Meter s	200			
2.9	Laying of one number XLPE power cable of 11 KV grade of following size in the existing RCC/HUME/METAL pipe as required					
2.9.1	Above 120sq.mm and upto 400sq.mm	Meter s	50			
2.10	Laying of one number XLPE power cable of 11 KV grade of following size in the existing masonry open duct as required					
2.10.1	Above 120sq.mm and upto 400sq.mm	Meter s	125			
3	Main Switch Boards & Sub Switch Boards					
	Design fabrication, supply at site , installation, erection testing and commissioning of the following cubicle type fully compartmentalised dust tight, vermine proof L.T. Switch boards fabricated out of 2 mm thickness for outer / 1.626mm thickness CRCA sheet for inner partitions , powder coated as per standards and having appropriate					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	rating busbars & earth bus and of approved shade. The busbars should be of suitably rated TPN Aluminium having the specified normal and short circuit capacities and should be insulated with heat shrinkable colour coded PVC sleeves and supported by DMC/SMC pillar/finger type busbar supports. Design and fabrication of the switch boards should be as per standards of State electrical inspectorate, K.S.E.B, and Bureau of Indian standards. The board shall be completed with earth bus of adequate capacity and double earth connection to all switches. Internal rigid connection etc. complete with hinged doors, name plates, heavy duty rubber gaskets, removable gland plates. Panel drawings should get prior approval from the consultants before fabrication.					
3.1	MSB	No	1			
	incomer					
	800 A , 50 kA 3P ACB, MDO WITH 3					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	O/C, E/F & S/C releases, Shunt Trip, No volt coil and close preventing devices. Space and provision for 3 phase CT type TOD energy meter with CT (DTR METERING) - 3 no					
	RYB indicator - 3 set ON OFF Trip Indication					
	Lowset earth fault relay in match with neutral CT's - 3 nos.					
	Power Analyzer -3 set.					
	800/5CT - 6 set					
	1000 A , TPN BUSBARS					
	800 A , 50 kA 4 P ACB, MDO WITH 3 O/C, E/F & S/C releases, Shunt Trip, No volt coil and close preventing devices for bus coupling- 2 no					
	MECHANICAL INTER LOCK WITH KEY - 6 NOS.					
	<u>OUT GOING</u>					
	400 A, TPN 35 KA, MCCB with 50 to 100% setting. Space and provision for 3 phase CT type TOD energy meter with CT - 3 no - 9 Nos					
3.2	MCCB FOR 160KVA - COMMON SERICE TRANSFORMER	no	1			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Space and provision for 3 phase CT type TOD energy meter with CT (DTR METERING)					
	250 A , 4 pole 35KA MCCB 50 to 100% setting with 3 o/c, e/f (NEAR 160KVA TRANSFORMER)					
	Total for Sub Head					
4	ELCTRICAL ROOM SB AND METERING SWITCH BOARDS					
4.1	METERING PANEL1,2,3	No	3			
	Incomer					
	400 A , TPN ISOLATOR - 1 no					
	RYB indicator - 1 set					
	400 A ,TPN BUSBARS					
	<u>OUT GOING</u>					
	Space and provision for 3 phase, CT and energy meter					
	3 no 200 A HRC fuse base with fuse and neutral link					
	200 A,TPN 25 KA, MCCB with TM Release - 2 Nos					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Space and provision for 3 phase, CT and energy meter					
	3 no 100A HRC fuse base with fuse and neutral link					
	100 A,TPN 25 KA, MCCB with TM Release - 4 Nos					
	Space and provision for 3 phase energy meter					
	3 no 63 A HRC fuse base with fuse and neutral link					
	63 A,TPN 25 KA, MCCB with TM Release - 2 Nos					
4.2	UTILITY - COMMON SERVICE	no	1			
	Incomer					
	Space and provision for 3 phase CT type energy meter with CT					
	250 A , 4 pole MCCB , with TM Release and with 3 o/c, e/f as incomer - 1 no					
	250 A 4 P ATS - 1 number					
	RYB indicator - 2 set , MFM-1no, ON/OFF Indn					
	250 A ,TPN BUSBARS					
	<u>OUT GOING</u>					
	125 A TPN isolator - 2 No					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	160A,TPN 25 KA, MCCB with TM Release - 1 Nos					
	125A,TPN 25 KA, MCCB with TM Release - 7 Nos					
	63 A,TPN 25 KA, MCCB with TM Release - 5 Nos					
4.3	LSB 1 and LSB 2 - COMMON LIGHTING	no	2			
	Incomer					
	125 A , 4 pole MCCB with TM Release and with 3 o/c, e/f as incomer - 1 no					
	RYB indicator - 1 set					
	125 A ,TPN BUSBARS					
	<u>OUT GOING</u>					
	50 -63A,TPN 25 KA, MCCB with TM Release - 7 Nos					
4.4	LIFT PANEL	no	2			
	Incomer					
	125A , TPN Isolator as incomer - 1 no					
	RYB indicator - 1 set					
	125 A ,TPN BUSBARS					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	<u>OUT GOING</u>					
	63 A,TPN 35 KA, MCCB with TM Release - 3 Nos					
4.5	PUMP PANEL	no	1			
	Incomer					
	125A , TPN Isolator as incomer - 1 no					
	RYB indicator - 1 set					
	125 A ,TPN BUSBARS					
	<u>OUT GOING</u>					
	32 A,TPN 16 KA, MCCB with TM Release - 6 Nos					
	DOL STARTER - 6 Nos					
4.6	APFC PANEL	no	1			
	Incomer					
	160A , 4 pole MCCB with TM Release as incomer - 1 no					
	APFC RELAY 6 STAGE BELUK MAKE					
	Switching stages - 25kvar,15kvar,10Kvar Sprague / Mammaya					
4.7	LIFT PANEL SSB	no	6			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Incomer					
	63A , TPN Isolator - 1 no					
	RYB indicator - 1 set					
	TPN AL BUSBARS					
	<u>OUT GOING</u>					
	63A, FP 25 KA, MCB - 1 Nos					
	25A, DP 25 KA, MCB - 1 Nos					
5	Cabling					
5.1	Supplying of XLPE insulated, heavy duty, aluminium conductor. 1.1KV grade armoured. MV cable of the following sizes as required, generally conforming to IS:1554/Part-I/1970					
5.1.1	3.5C x 240 Sqmm, Ar.Al	Meter	450			
5.1.2	3.5C x 185Sqmm, Ar, Al.	Meter	600			
5.1.3	3.5C x 150Sqmm Ar, Al.	Meter	50			
5.1.4	3.5C x 120Sqmm Ar, Al.	Meter	50			
5.1.5	3.5Cx95 Sqmm Ar, Al.	Meter	75			
5.1.6	3.5Cx70 Sqmm Ar, Al.	Meter	300			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
5.1.7	3.5Cx 50 Sqmm Ar, Al.	Meter	100			
5.1.8	3.5Cx35 Sqmm Ar, Al.	Meter	50			
5.1.9	4Cx25 Sqmm Ar, Al.	Meter	400			
5.1.10	4Cx16 Sqmm Ar, Al.	Meter	1800			
5.1.11	4Cx10 Sqmm Ar, Al.	Meter	100			
5.1.12	3Cx6 Sqmm Ar, Al.	Meter	200			
5.2	Laying and fixing of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size in the existing mansonry open duct as required					
5.2.1	Upto 35 sq. mm	Meter	50			
5.2.2	Above 35 sq. mm and upto 95 sq. mm	Meter	50			
5.2.3	Above 95 sq. mm and upto 185 sq. mm	Meter	100			
5.2.4	Above 185 sq. mm and upto 400 sq. mm	Meter	500			
5.3	Laying and fixing of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size on wall surface as requires					
5.3.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Meter	200			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
5.3.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	Meter	250			
5.3.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	Meter	150			
5.3.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	Meter	150			
5.4	Laying and fixing of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size on cable tray as required.					
5.4.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Meter	2000			
5.4.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	Meter	200			
5.4.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	Meter	25			
5.4.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	Meter	500			
5.5	Supplying and making end termination with brass compression gland and aluminium lugs for following size of					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.					
5.5.1	3.5C x 240 Sqmm, Ar.Al	Each	24			
5.5.2	3.5C x 185Sqmm, Ar, Al.	Each	18			
5.5.3	3.5C x 150Sqmm Ar, Al.	Each	2			
5.5.4	3.5C x 120Sqmm Ar, Al.	Each	2			
5.5.5	3.5Cx95 Sqmm Ar, Al.	Each	8			
5.5.6	3.5Cx 70 Sqmm Ar, Al.	Each	8			
5.5.7	3.5Cx 50 Sqmm Ar, Al.	Each	10			
5.5.8	3.5Cx35 Sqmm Ar, Al.	Each	8			
5.5.9	4Cx25 Sqmm Ar, Al.	Each	12			
5.5.10	4Cx16 Sqmm Ar, Al.	Each	36			
5.5.11	4Cx10 Sqmm Ar, Al.	Each	8			
5.5.12	3Cx10/3Cx6 Sqmm Ar, Al.	Each	12			
5.6	CABLE TRAY					
	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors,					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.					
5.6.1	100 mm width X 50 mm depth X 1.6 mm thickness	Mtr	150			
5.6.2	150 mm width X 50 mm depth X 1.6 mm thickness	Mtr	150			
5.6.3	200 mm width X 50 mm depth X 1.6 mm thickness	Mtr	250			
5.6.4	300 mm width X 50 mm depth X 1.6 mm thickness	Mtr	300			
5.6.5	450 mm width X 50 mm depth X 2 mm thickness	Mtr	250			
5.6.6	600 mm width X 50 mm depth X 2 mm thickness	Mtr	300			
	Supplying and installing following size of perforated pre-painted M.S. cable trays bends with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.					
5.6.7	100 mm width X 50 mm depth X 1.6 mm thickness	No	12			
5.6.8	150 mm width X 50 mm depth X 1.6	No	12			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	mm thickness					
5.6.9	200 mm width X 50 mm depth X 1.6 mm thickness	No	20			
5.6.10	300 mm width X 50 mm depth X 1.6 mm thickness	No	30			
5.6.11	450 mm width X 50 mm depth X 2 mm thickness	No	40			
5.6.12	600 mm width X 50 mm depth X 2 mm thickness	No	30			
6	Earthing					
6.1	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	Set	20			
6.2	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Set	10			
6.3	Supplying and laying 6 SWG G.I. wire	Meter	400			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	at 0.50 metre below ground level for conductor earth electrode, including connection/ termination with GI thimble etc. as required. Including welding, tinning, fasteners etc. Complete					
6.4	Providing and fixing 50 mm x 6 mm GI strip on surface or in recess for connections etc. as required. Including welding, tinning, fasteners etc. Complete	Meter	1000			
6.5	Providing and fixing 4mm dia copper wire on surface or in recess for loop earthing as required. (8 SWG) Including welding, tinning, fasteners etc. Complete	Meter	400			
6.6	Providing and fixing 10SWG copper wire on surface or in recess for loop earthing as required Including welding, tinning, fasteners etc. complete.	Meter	550			
6.7	Providing and fixing 25 mm X 6 mm copper strip on surface or in recess for connections etc. as required. Including welding, tinning, fasteners etc. complete	Meter	300			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
6.8	Providing and fixing 25 mm X 3 mm copper strip on surface or in recess for connections etc. as required. Including welding, tinning, fastners etc. Complete	Meter	500			
6.9	Earthing with G.I. earth plate 1200 mm X 1200 mm X 12mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Set	15			
	Total for Sub Head					
7	SAFETY ITEMS					
7.1	Supplying of non skid rubber mat 12mm thick and 900 mm width.	Each	30			
7.2	Supplying of fire bucket painted red & approved quality (set of 4 buckets).	Set	12			
7.3	Supplying and fixing danger plate 440 volts written in two languages.	Each	30			
7.4	Supply and fixing carbondioxide fire extinguisher type 4.5 kg capacity.	Each	10			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
7.5	Supplying of first aid box.	Each	6			
7.6	Supplying and fixing of shock treatment chart.	Each	6			
7.7	Hand gloves suitable for 415 V	Each	6			
	Total for Sub Head					
8	WIRING					
8.1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc. as required.	No	275			
8.2	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular	No	30			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	platesuitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc. as required.					
8.3	Wiring for group controlled 2 light group light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc. as required.	No	80			
8.4	Wiring for group controlled 3 light group light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc. as required.	No	60			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
8.5	Wiring for group controlled 4 light group light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc. as required.	No	10			
9.0	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required					
9.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Meter	2500			
9.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Meter	3000			
9.3	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Meter	1000			
10.0	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including	No	50			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required. (For light plugs to be used in non residential buildings).					
10.1	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	No	10			
10.2	Supplying and fixing brass batten/ angle holder including connection etc. as required.	No	10			
10.3	Supplying and fixing stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	No	55			
11.0	Supply and installation of light fittings					
11.1	LED single tube light fittings of 22 w with base frame and all accessories - Osram LUXLINE G2 LED BATTON	No	350			
11.2	10W LED BULB with drive with surface	No	300			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	mounted ceiling fitting with all accessories -SPEC housing, PMMA diffuser, Osram LED Comfo ceiling					
11.3	Supply and installation of 1200mm ceiling fan with all accessories - Crompton	No	55			
11.4	Supply and installation of 305MM , single phase , exhaust fan - Almonard /Crompton	No	3			
11.5	Supply and installation of 1000 CFM hi static exhaust fan with all accessories - Almonard /Crompton	No	51			
	DISTRIBUTION BOARDS					
12.0	MCB/MCCB DB					
	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer) as required.					
12.1	8way Double door	No	3			
	Supplying and fixing of following ways					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	surface/ recess mounting 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer) as required.					
12.2	8way Double door	No	15			
12.3	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required. 63 A	No	3			
12.4	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required. 40 A	No	15			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
12.5	Supplying and fixing following rating, four pole, 415 volts, 40A isolator in the existing MCB DB complete with connections, testing and	No	15			
12.6	Supplying and fixing following rating, four pole, 415 volts, 63A isolator in the existing MCB DB complete with connections, testing and	No	3			
12.7	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load	No	400			
12.8	Supplying and fixing triple pole 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load	No	6			
13.0	STREET LIGHT /YARD LIGHTS					
13.1	Single arm Standard 9M overall High GI Octagonal street lighting pole, with 1.5m over hung, 400x400x12mm thick base plate, Junction Box suitable for 2nos 4Cx25sqmm, 2nos of 3Cx2.5 cu cable, MCB, cable entry pipe, civil foundation etc.,	Nos	12			
14.0	Erection of metallic pole of following length in cement concrete 1:3:6 (1					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.					
14.1	Above 8.0 metre and upto 10.0 metre	Each	12			
15.0	YARD LIGHT FITTINGS					
15.1	Supplying and fixing of 32 mm dia X 2.00 metres long G.I. pipe (medium class) bracket for mounting of fluorescent / HPMV / HPSV street light fitting on pole including bending the pipe to the required shape, 2 nos 40 mm X 3 mm flat iron clamps with nuts, bolts and washer, painting the flat iron with primer and finish paint etc. as required.	Each	12			
15.2	1X 80W LED Street light fitting with LED lamp with driver all necessary acces.	Each	12			
15.3	Supply all materials and installation of 6A MCB with PVC enclosure including minor civil works	Each	12			
15.4	Supply all materials and laying of 2 core 2.5 sq.mm Ar. Copper cable	Each	300			
15.4	Supply all materials and laying of 4	Each	300			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	core 2.5 sq.mm Ar. Copper cable					
15.5	Supply all materials and laying of 4 core 4 sq.mm Ar. Copper cable	Each	200			
15.6	Supply all materials and providing end termination of 2cx 2.5, 4x2.5 and 4c x 4sq.mm copper cale	Each	60			
	Total for Sub Head					
16	LIGHTENING PROTECTION					
16.1	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	Set	12			
16.2	Providing and fixing 25 mm x 3 mm GI strip on parapet or surface of wall for lightening conductor with insulator etc. Complete as required at site for horzondal run	Meter	900			
16.3	Providing and fixing 25 mm x 3 mm GI strip on parapet or surface of wall	Meter	120			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	for lightening conductor with insulator etc. Complete as required at site for vertical run					
16.4	Providing and fixing testing joint 25 x 3 mm GI strip 125mm long with four nos. GI bolt and nuts etc. Complete as requitred	no	12			
16.5	Providing and fixing 32 mm x 6 mm GI strip on parapet or surface of wall for lightening conductor with insulator etc. Complete as required at site for vertical run	Meter	120			
16.6	Providing and fixing Lightening conductor finial , made of 25mm dia. 300mm long copper tube having single prong on top with 85mm dia 3mm thick copper base plate including holes etc. Complete as required.	no	6			
	Total for Sub Head					
	GENERATOR					
17	Supply at site and installation testing and commissioning of 1 no 160 K V A, 3 phase 415 V 50 Hz water cooled	Each	1			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	<p>Diesel Generator set with Acoustic Enclosure comprising Diesel Engine Alternator, Fuel Tank, Electric starting system with Battery, Antivibration pads, control and protection panel, necessary control cabling from Common Panel in Substation upto DG complete as per Kerala State Inspectorate/ KPCB standards, residential type silencer etc complete. The Alternator should be self excited and self regulated. The D G Set should be designed for continuous operation. The scope include first filling of oil and fuel for commissioning of the set. The control panel should have MCCB continuously adjustable electronic release MCCB with inbuilt O/C and earth fault protection. and all other standard accessories as per rules. Cladding to be made to the silencer/exhaust pipe complete as per standards. The length of the exhaust pipe to be mached with the site requirements and relevent rules. all civil works under civil</p>					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	contractor scope					
	Total for Sub Head 6					
18	11KV DP STRUCTURE					
18.1	11KV 9 Mtr Hot dip galvanised 2 POLE Structure :- Fabrication, supply all materials and erection of Hot dip galvanised 11 KV Double Pole structure using 200x100 mm ISMB for poles and 7 NOS cross channel of ISMC 100x50mm and 65x65x6mm Channel supporting structure for 11 KV components with MS angle cross bracings , supports, on a suitable concrete foundation complete excluding the cost of foundation. All the components shall be as per the drawing (Note:All the MS items shall be hot dip galvanised)	Each	1			
18.2	Erection of Two pole structure in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including cement concrete, excavation and refilling etc. as required and secured with holding	Each	1			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	clamps, bolts, nuts, etc. as required. All types of RCC/Foundation works as per drawing/specification and as directed by Engineer-in-Charge at all levels.					
18.3	Supplying and erection of galvanised stay set for 11KV over headlines complete with 19/ 20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm thick, thimble, stayclamps, turn buckle (20 mm X 600 mm), 7/ 4.00 mm dia G.I. stay wire and 22 KV strain insulator etc in cement concrete 1:3:6(1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc.as required.	Each	2			
18.4	Supplying and erection of 11KV pin insulator complete with large steel head G.I. pin, nuts, washers etc. as required.	Each	6			
18.5	Supplying and erection of 45 KN 11KV disc insulator for 11KV overhead lines with galvanised insulator fittings, ball and socket type and complete with	Each	6			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	galvanised strain clamps, bolts, nuts, washers etc. as required.					
18.6	Gang operated, triple pole, 400 A 11 KV Air Break Switch mounted on provided channel with adequate length of GI pipe for operating handle erected supported by external bush bearing. The operating handle should be provided with locking arrangement with lock & key at suitable height from ground level with necessary clamp. This should have hot dip galvanized hardware (Corrosion resistance) alignment of three arms must be perfect and GOAB operation must be smooth and simultaneous operating hands must be suitable for normal height of operator.	Set	1			
18.7	11 KV outdoor type Drop Out Fuse with 11 KV insulator complete with fuse holder fuse barrel with metal fitting fuse element mounted on MS Channel. DO fuse set of three nos of 11 KV should be erected on the provided channel with vertical mounting expansion type and	Set	1			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	consisting of base plate post insulators, suitable brace terminal connector conforming to IS 5790 / 1970 with all necessary hardware mounting.					
18.8	11 KV Lightning Arresters with necessary ancillary material , complete erected on provided cross arm and connected to over head line. The lightning arrestors to be provided should be of Thyrite type and suitable for 11 KV supply. The cost included the set of 3 NOS of 11 KV lightning arrestors. The distance between the lightning arrestors should be as per the relevant IS.	Set	1			
18.90	Supply of ACSR RACOON conductor	M	50			
18.10	Erection of ACSR RACOON conductor on the posts with necessary binding materials etc. as required.	M	50			
	Total for Sub Head					
19	STATUTORY APPROVAL AND LAISON WORKS					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Preparation, submission of drawings to Electrical inspectorate and obtaining approval, arranging inspection for entire installation including Generator and wiring ,obtaining sanction orders for the elctrical installation, complete. Including all incidental expenses except the fees payable to the elctrical inspectorete with valid receipts from the authorities and Preparation, submission of drawings of Total Electrical INSTALLATION to KSEB and obtaining Sanction, arranging inspection for entire installation by KSEB including Generator and wiring obtaining sanction orders for the elctrical installation, complete. Including all incidental expenses except the fees payable to the KSEB with valid receipts from the authorities.	Each	1			
	Total for Sub Head					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
20	ELEVATORS					
	Preparation of all drawings, submitting and getting approval from Electrical Inspectorate, submitting of completion certificates and arranging inspection, obtaining license to operate for lifts from Electrical Inspectorate. All statutory payments will be reimbursed on production of the original receipts. Approved make : OTIS/ KONE/ THYSSENKRUP/ MISTUBISHI/JHONSON					
	Design, engineering, manufacture, testing before dispatch , delivery to site , erection , testing , commissioning and putting in to operation of following Lifts as per the attached Technical specifications and drawings.					
	· Speed @ 1m/sec.(Traffic analysis and recommendation for speed to be furnished by supplier).					
	· Travel , steps and openings and lift well as per drawing.(20m.Approx)					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	· Car height=2.30m.					
	· Finishes=Stainless steel door.					
	· Inside flooring with polished granite .					
	· Wall=etched with ¹ / ₂ mirror.					
	· Door operation =automatic.					
	· All other Specifications= Specify Manufactures details.					
	· Pit Depth- 1600mm.					
	· Head room-4800mm min.					
	Car illumination- Compact Florescent Light Fittings					
	· No Of Entrance- One - Location In Front.					
	· Car Entrance- Automatic Centre Opening Doors in Stainless Steel Finish.					
	· Door Safety- Full Length Infra - Red Light Curtain.					
	· Landing Entrance- Automatic Centre Opening Doors In Stainless Steel Finish.					
	· Clear Opening-1100 mm Width X 2000 mm Height final clear.					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	· Controls- Selective Collective Simplex.					
	· Car & landing Indicators- D&P 7 Segment 25 Mm Display.					
	· Guarantee: 24 months include:-					
	1) Clearing lift equipment.					
	2) Lubrication of all parts.					
	3) Replacing lubrication oils.					
	4) Checking and adjusting contacts.					
	· Tests: At site tests as per ISS to be carried out before handing over.					
	1) Supply of lift materials.					
	2) Installation of lift.					
	3) Minor builders work.					
	4) Scaffolding.					
	5) Free serving fro 24 months after handing over.					
	6) Battery operated alarm.					
	7) Battery operated fluorescent light.					
	8) Mirror					
	9) Door frames.					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	10) Supporting steel.					
	11) Electrical inspectorate approval for lift installation.					
	12) Current charges for installation of lift and testing(electric connection to be taken by them).					
	· Period of completion: 6 months.					
	· Type of Drive -V3F.					
	· Location of Machine room-top.					
	· Power supply -415 Volts Three-Phase 50cycles Ac.					
	· Auxiliary- Single Phase 220 V 50 Cycles A.C.					
	· Control: Solid state fully computerised control system for variable voltage, variable frequency V3F operation should be provided ensuring.					
	a. jerk free start, stop & inter floor movement.					
	b. silent operation.					
	c. easy site programmability &diagnostic facility.					
	d. high reliability with near downtime					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	due to electronic failure.					
	e. facility for retention of registered calls in case of power failure.					
	· Operation: full collective with/ without attendant.					
	· Machine: Geared traction m/c directly above the hoist way with m/c room.					
	· Car:					
	-digital position indicator in car & landing.					
	-intercom facility in car					
	-aluminium hand rail on rear panel.					
	-ventilation assembly pressure fan.					
	-comprehensive car operating panel with					
	a. luminous /LED buttons.					
	b. overload warning/buzzer,					
	c. temperature indicator					
	d. door open button.					
	e. alarm button.					
	f. car direction indicator.					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	g. attendant/auto mode key					
	h. group/independent traction control.					
	· Floor landings:					
	luminous LED call /halt buttons.					
	luminous /LED car position & car travel direction indicator.					
	· Safety_:					
	a. automatic rescue device that should safely & automatically move the car to the nearest landing level in case of power failure/system failure & open the door.					
	b. fully integrated door protection system to prevent closure in case of obstruction at any ht. the door should close automatically once the obstruction is removed.					
A	Passenger Lift					
	Type: 13 Passenger, Capacity: 1040 Kg, Lift Shaft Size: 2450(W) X 2650 (D) mm, Car Size: 2000 X 1800 mm, Stainless steel hairline finish car ceiling and car panels, 10 mm Granite	each	4			

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	tile flooring, complete as per the technical spec attached.					
B	Service Lift					
	Capacity: 3000Kg, Lift Shaft Size: 3150(W) X 3850 (D) mm, Car Size: 2200 x 3000 mm, Stainless steel hairline finish car ceiling and car panels,6 mm Aluminium chequered flooring complete as per the technical spec attached.(TOTAL inclusive of all taxes)	each	2			
	Total for Sub Head					
	Grand Total for Electrical works - Part C					
	GRAND TOTAL FOR PART A, B & C					
	TOTAL (RUPEES.....)					
	I / We agree to carry out the above works at the above rates quoted. I / We understand that the detailed shop drawings required for the items has to be submitted by us and shall be approved by the Consultant /INKEL after evaluation. The payment shall be based on the actual quantites of works undertaken as measured and certified by the Consultant/					

Item No.	Description of items	Unit	Quantity	Rate		Amount
				<i>In figures</i>	<i>In Words</i>	
	Engineer -in-charge of INKEL. Based on the rates quoted the total amount of Contract as per above BOQ is RS..... /- (In words : Rupees					
	Signature with seal					
	Name & Address of Contractor					
	Place & Date					