

**National Agricultural Cooperative Marketing Federation of India Ltd.
(NAFED)**

**REQUEST FOR PROPOSAL
INTERIOR-FURNISHING, ELECTRICAL &
HVAC WORKS OF NAFED OFFICE SPACE
AT CRESCENT COURT, 2ND FLOOR, NEW
NO.108 POONAMALLEE HIGH ROAD,
CHENNAI-600 084**

Tender No. : _____

**The State Head
NAFED, Crescent Court, 2nd floor
New no.108 Poonamallee High Road
Chennai-600 084**

PART –I

TECHNICAL BID

ARCHITECTS:
M/s DEZIGN INTERIO-ARCH SOLUTIONS
Mob: 9810161185
Email: dezn.interioarchsolutions@gmail.com



Important Notice

THIS TENDER DOCUMENT IS NOT TRANSFERABLE.

This document is the property of The NAFED. It should not be copied, distributed or recorded on any medium (electronic or otherwise) without NAFED's written permission. Use of contents given in this document, even by the authorised personnel/agencies for any purpose other than that specified herein, is strictly prohibited as it shall amount to copyright violation and thus shall be punishable under the Indian law.

Bidders are advised to study this tender document carefully. Submission of bid shall be deemed to have been done after careful study and examination of the tender document with full understanding of its implications.

The response to this tender should be full and complete in all respects. Incomplete or partial bids shall be rejected. The bidder must quote for all the items asked for, in this tender/ Request for Proposal.

The bidder shall bear all costs associated with the preparation and submission of the bid, including cost of presentation and demonstration for the purposes of clarification of the bid, if so desired by NAFED. NAFED will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

APPENDIX SHOWING IMPORTANT SCHEDULES

1. Quotation Based on : Item Rate Tender
2. Estimated Amount : Rs. **63,20,500/-**
3. Cost of tender document : Rs. **2,500/-** (Non-refundable)
4. Sale of tender (Date) : **25/04/2024 to 16/05/2024**
from 10:00 AM to 3:30 PM
5. Last Date of Bid Submission : **16/05/2024** Upto 2.30 pm and technical bid will be
opened on **16/05/2024** at 3.00 pm.
6. Earnest money Deposit : **Rs. 1,26,410**
7. Commencement of work : Within 10 days of letter of award from the Client
8. Period of completion of work : **60** Days from date of Work Order (For entire work).
9. Liquidated Damages : **Rs. 5,000/-** per day, subject to the maximum of 10% of
contract Value.
10. Period of final measurement : Within two months after completion of work.
11. Payment Terms : Minimum Value of Rs. **25 Lakhs** Running Bill has to
be raised at the gap of at least 20 days.
12. Security deposit : Retention amount shall be deducted from each running
bill and the final bill to the extent of 10% of the gross
amount payable. The earnest money deposited shall be
adjusted against this security deposit. The security
deposit shall be released on the expiry of defects liability
period stipulated in the contract.
13. Tax deduction at source : As per prevailing rates from each bill.
14. Defects Liability period : **Twelve Months** from the date of virtual completion
15. Mobilization Advance: : No mobilization advance shall be paid for this work.
16. GST : The rates assured by the contractor is exclusive of
GST. GST as applicable, on works contract, shall be paid
extra on Final Amount.
17. Labour Cess, if applicable : 1% of Contract Value will be deducted as Labour
Cess payable at Chennai.
18. Deviation Limit : 25%
19. Corrigendum : The corrigendum/amendment related to this tender, if
any, will be published on Company (NAFED) website only.



SECTION – I: INVITATION TO TENDERERS

Sealed tenders in two bid system (Technical & Financial) are invited from established experienced Contractors having sound financial position, by The State Head, NAFED, Crescent Court, 2nd floor, New no.108 Poonamallee High Road, Chennai-600 084.

S. No.	Name of Work
1.	INTERIOR-FURNISHING, ELECTRICAL & HVAC WORKS of NAFED Office at Crescent Court, 2nd floor, New no.108 Poonamallee High Road, Chennai-600 084.

- 1 The tender document containing terms and conditions including Technical and Financial Bid etc. can be obtained from our NAFED office situated at Crescent Court, 2nd floor, New no.108 Poonamallee High Road, Chennai-600 084 from Monday to Friday except Saturday, Sunday & Holiday between the dates as mentioned in the tender document.

The tender documents can also be downloaded from our website <https://www.nafed-india.com/tenders> If downloaded from website then the contractor has to attach a demand draft for the cost of tender document from a Scheduled Bank shall be paid in favour of “National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED)” payable at Chennai as cost of Tender documents along with EMD failing which tender will be rejected. The right is reserved by the officer inviting this tender to revise or amend the tender documents prior to the date or time notified for submission of the tender. Such revisions, amendments shall be notified in the form of addendum or corrigendum at company’s Website. Bidders are advised to look at company’s website regularly for any such corrigendum.

Eligibility Criteria

Tenders are invited into two bid system i.e. “Technical bid” and “Financial bid”.

The intending contractor/bidder should submit the following details in the technical bid duly contained in closed sealed **Envelope no. 1 super-scribed as “Technical bid”**:

- a. The tenderers must satisfy themselves that they have adequate experience of this comprehensive multi-disciplinary project within the stipulated time schedule. They should produce documentary proof of satisfactory completion of at least:

One job of similar nature costing not less than Rs.51.0 lakhs or

Two jobs of similar nature costing not less than Rs.32.0 lakhs each or

Three jobs of similar nature costing not less than Rs25.0 lakhs each,

for Government, Semi-Government, Public Sector Organization in last five years from the date of advertisement with Work Orders, Completion Certificates, complete details, name, address & phone nos. of clients etc. The similar nature works shall mean renovations and repairs or new works involving civil, woodwork, partitions, panelling, flooring, false ceiling, loose furniture, electrical works & air conditioning works for office spaces/premises. Subletting works, back to back basis works or joint venture works will not be admissible and considered.



- b. Demand Draft for the cost of tender document from a Scheduled Bank shall be paid in favour of "The Oriental Insurance Co. Ltd" Payable at Jaipur.
- c. Demand Draft from a Scheduled Bank in support of having paid the earnest money in favour of "National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED)" payable at Chennai.
- d. Copy of Permanent Account Number (PAN)
- e. Copy of GST number
- f. Annual Report (Balance sheet and Profit and Loss Account of last 3 Years ending March 31 of previous financial year .The average annual turnover shall be at least 50% of total estimated cost .
- g. Details of projects in hand with name of clients, addresses & phone numbers expected date of completion of project, ongoing status of project and certified bills (if any) etc. till date..
- h. Bid proposal form as given in tender document duly filled up and details enclosed.
- i. Completely filled and duly signed Integrity Pact Agreement as per Section VI.
- j. For MSME bidders if L1 and awarded the LOI/Work Order, they will submit a Performance bank guarantee of amount equal to EMD within 7 days from the award of LOI/Work Order and if the performance bank guarantee is not submitted, agreement cannot be signed & legal action can be taken by THE NAFED on L1 bidder. For MSME in addition to performance bank guarantee, the Employer at the time of making any payment to the contractor for work done or supply made under the contract will make deductions as per tender terms & conditions. Besides the above for MSME, the rules/guidelines framed by CPWD will be followed/applicable. MSME bidders has to submit all the documentary proofs as mentioned in CPWD guidelines prior to attend the Pre-Bid meeting as well as in their technical bids.

The "Financial bid" shall be contained in a closed sealed **envelope no. 2 super-scribed as "financial bid"**. The financial bid should be duly filled in by the intending tenders. This shall form the part of the agreement.

Both the sealed envelopes of "Technical bid" and "financial bid" should be kept in envelope no. 3 sealed and subscribed with the name of work on the top of envelope shall be deposited in the office of The State Head, NAFED, Crescent Court, 2nd floor, New no.108 Poonamallee High Road, Chennai-600 084, on or before at the stipulated date & time mentioned in the tender document. The tender received in any manner other than prescribed above shall be summarily rejected. The company will not accept any responsibility for the tender lost in transit.

At first instance technical bid shall be opened on the stipulated date & time mentioned in the tender document. The technical bid will then be evaluated on the basis of documents/information furnished as also if necessary/required, after physical examination of the tender office/workshop



& projects successfully executed by them. The criteria followed by the company will be at its sole discretion and will not be open to question. The contractors who shall qualify in the technical bid will only be eligible for the opening of their financial bid. On any stage during the tendering process or contract period, if the document/submitted by the bidder found to be fake/forged then the EMD, Security Deposit, Retention amount and any other due amount, if any, will be forfeited, legal action will be taken against the firm/bidder and the firm/bidder will be blacklisted in the NAFED.

Date of commencement of the work shall be reckoned from the 10th day of award of work.

The work as detailed in this tender shall be executed and completed in all respects in accordance with the Tender documents, which includes instructions to tenders, General conditions of contract, special conditions of contract, schedule of Quantities, list of approved materials and Drawings to complete satisfaction of the Architects and the Employer.

Rates must be quoted for complete work at site exclusive of GST. All taxes (excluding GST) and duties including ESI charges etc. as applicable at Chennai on the date of receipt of tender. Central & State Taxes, Octroi, Royalties etc. on works and materials required for use in the execution of this project shall be entirely borne and payable by the Contractor and the Employer will not entertain any claim what so ever in this respect.

The tender for the works shall remain open for acceptance for a period of 90 days from the date of opening of tenders. If any tenderer withdraws his tender before said period or makes any modifications in terms & conditions of the tender which are not acceptable by the company, then the company, shall without prejudice to any other right or remedy, be at liberty to forfeit 100% of the earnest money as aforesaid.

The Earnest Money will be refunded without any interest to all the unsuccessful tenderer after the award of the work subject to the relevant provisions in the tender documents.

The retention money (i.e. deduction from interim & final bill shall be 10% of the gross value of each bill. The retention money & earnest money shall form the total security deposit during execution of work. The retention amount will be refunded to the contractor after the end of Defect Liability Period, provided he has satisfactorily carried out all the works and attended to all defects in accordance with the condition of contract. No interest is allowed on retention money & earnest money.

Earnest money of the successful tender is liable to be forfeited in the event of refusal or delay on his part in signing the agreement or starting the work as mentioned in the tender and employer will be at liberty to award it to another contractor.

The State Head, NAFED, Crescent Court, 2nd floor, New no.108 Poonamallee High Road, Chennai-600 084 reserves the right of accepting the whole or part of the tender and the tenderer shall be bound to perform the same at the rate quoted.



Canvassing whether directly or indirectly in connection with the tender is strictly prohibited and the tenders submitted by the contractors who resort to canvassing in any form would be liable to rejection.

The tendering firms, in case the tender is a partnership firm, shall submit the tender signed by the partners. In the event of absence of any partner, it must be signed on his behalf by a person holding power of attorney which shall be attached along with the tender and it must also disclose that the contractor is duly registered under the Indian partnership Act or not.

The tender shall unconditionally accept terms & conditions of the company. Conditional offer shall be summarily rejected.

The State Head,
NAFED,
Crescent Court, 2nd floor,
New no.108 Poonamallee High Road,
Chennai-600 084



STANDARD TENDER OFFER

THE NATIONAL AGRICULTURAL COOPERATIVE MARKETING FEDERATION OF INDIA LTD.

Item Rate Tender & Contract for works

<Name of the work>

.....
.....

TENDER

I/We have read and examined the notice inviting tender, Schedule, 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 The NAFED Chennai within the time specified in schedule, viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in General Rules and Directions and the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

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

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 therefrom to any person other than a person to whom I/we am/are authorised to communicate the same or use the information in any manner prejudicial to the safety of The NAFED.

On any stage during the contract period, if the documents submitted by the us are found to be fake/forged then the EMD, Security Deposit, Retention amount and any other due amount, if any, will be forfeited, legal action will be taken against us and we will be blacklisted in the NAFED.

I/We agree that if I/we fail to commence the work specified in the above memorandum, an amount equal to the amount of the earnest money deposit mentioned in the form of invitation of tender shall be absolutely forfeited by The NAFED and the same at the option of the competent authority on behalf of the State Head, NAFED office at Chennai be recovered without prejudice to any other right or remedy available in law out of the deposit in so far as the same extend in terms of the said bond and in the event of deficiency out of any other money due to me/us under this contract or otherwise.



Dated:.....

Signature and Stamp of Contractor

Place:

Postal Address

Witness:

Address:

Occupation:



SECTION-II: INSTRUCTION TO TENDERERS

The tender is advised to visit and inspect the site at his own cost and responsibility and to secure all necessary information which may be required for completing the tender. Ignorance of site conditions or local information shall not be considered as an excuse for non-performance of the contract. All costs, charges and expenses that may be incurred by the tender in connection with the preparation of his tender shall be borne by him and the Employer/Architect does not accept any liability whatsoever in this regard.

Time is the essence of the contract and the tender are required to complete the work in all respects within the stipulated time of completion and hand over the same, complete in all respects to the satisfaction of the Client/Architects.

The tender should contain not only the rates but also the value of each item of work entered in the prescribed column of the Bill of Items. The rates quoted by the tender should be expressed accurately both in words and figures so that there is not discrepancy. All corrections in the tender shall be duly attested by initials of the tender. Corrections if not attested, entail rejection of tender. The rates quoted by the tender in item rate tender will be the basis (and not the amounts in case of discrepancies) in finalising the tender.

It shall be clearly understood that the rates quoted in the tender are to be for complete work at site as per instructions to tenderer, conditions of contract, special conditions of contract specifications, addenda referred to therein and also for all such works as are necessary for the proper completion of the contract. The rates shall be firm and shall not be subject to cost escalation on account of labour and material and labour conditions or any other reason whatsoever.

The tenderer shall use only the form issued with this tender to fill up the rates.

Integrity Pact

To ensure transparency, equity, and competitiveness and in compliance with the CVC guidelines, this tender shall be covered under the Integrity Pact (IP) policy of NAFED. The pact essentially envisages an agreement between the prospective bidders/vendors and NAFED committing the persons/officials of both the parties, not to exercise any corrupt influence on any aspect of the contract. The format of the agreement is enclosed.

Signing of the IP with NAFED would be one of the preliminary qualification for further evaluation. In other words, entering into this pact would be one of the preliminary qualification for this tender and the pact shall be effective from the stage of invitation of bids till the complete execution of the contract. Any vendor/bidder not signed the document or refusing to sign shall be disqualified in the bidding process.

Every page of the tender shall be signed on the bottom and any tender not so completed is liable to be treated as defective and liable to be rejected.



The successful tenderer will be notified about the acceptance of his tender by the employer and he will execute agreement within 10 (ten) days thereof, failing which his tender would be liable to rejection with forfeiture of the Earnest Money and the employer would be at Liberty to award it to another tenderer.

The contract will be governed by the Indian Contract Act, Indian Sale of goods Act and all other relevant laws. All payments due to the contractor under the contract will be made in Indian Rupees Currency.

The rates quoted shall be for complete work at site and should be inclusive of incidentals expenses necessary for carrying out the work. The rates shall be exclusive of GST as applicable. The rates shall be firm and shall not be subject to cost escalation of labour and material and exchange variations, labour conditions or any other conditions whatsoever.

A schedule of approximate quantities for various items accompanies this tender. It shall be clearly understood that neither the architect nor the employer accept any responsibility for the correctness or completeness of this schedule in respect of items and quantities and this schedule is liable to alterations by omission, deduction or additions at the discretion of the employer in consultation with the architect without violating the terms of the contract.

The employer does not bind itself to accept the lowest or any tender or to assign any reason thereof and also reserves the right of accepting the whole or part of the tender. The part acceptance will not violate the terms and conditions of the contract and will execute the work at the specified rates without any extra charges or compensation.

Tax deductions will be made as per the prevailing rates from the contractors on account bills.



SECTION III - GENERAL CONDITIONS OF THE CONTRACT

DIRECTIONS REGARDING PROCEDURES

In construing these conditions, specifications and Contract Agreement, the following words shall have the meaning here in assigned to them except where the subject or context otherwise requires:

(a) "Employer/Client" Shall mean The NAFED having its Office at Crescent Court, 2nd floor, New no.108 Poonamallee High Road, Chennai-600 084 and shall include its authorized representative/s, assign/s and successor/s.

(b) "Contractor/bidder" means the person or persons, firm and company whether incorporated or not, employed as Contractor or manufacturer or dealer or distributor or wholesaler or supplier by the Client for undertaking the work and shall include their representatives, successors, legal heirs and permitted assigns.

(c) "Consultant/Architect" Shall mean the Lead Consultant as mentioned in the tender document (and shall include his authorised representative) or in the event of his death or termination of his services by the Employer in his sole and unqualified discretion, such other person/persons as shall be provided always that no person subsequently appointed to be Architect under this contract shall be entitled to disregard or over rule any previous decision or direction given or expressed by the Architect specified here in unless otherwise approved by the Employer.

(d) "Project Manager" Shall mean the accredited representative of the client and shall be over all in-charge of the work. He shall administer the contract as per contract Agreement conditions.

(e) "Contract" Means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of The State Head, NAFED Chennai, Crescent Court, 2nd floor, New no.108 Poonamallee High Road, Chennai-600 084 and the Contractor, together with the documents referred to therein including these tender document, pre-bid clarifications, corrigendum, conditions, specifications, designs, drawings and instructions issued from time to time by the NAFED Or the consultant and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.

(f) In the contract, the following expressions shall, unless the context otherwise requires have the meanings, hereby respectively assigned to them.

(g) The expression works or work shall, unless there be something either in the subject or context repugnant to such construction/installation, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.



(h) The site shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which be allotted or used for the purpose of carrying out the contract. The site of works will be at as mentioned in the tender document.

(i) Schedule(s) referred to in these conditions shall mean the relevant schedule(s).

(j) Tendered Value means the value of the entire work as stipulated in the letter of award of work.

General

The work shall be carried out strictly in accordance with the specifications of materials and workmanship given hereunder. In case of any discrepancy, the following order of preference shall be followed:

- i. Particular Specifications.
- ii. Drawings.
- iii. CPWD Specifications & Latest DSR on date of Publication of the tender.
- iv. National Building Code and Relevant IS Provisions.

In case there are no specifications for items shown on the drawings or where items are not exhaustively described, the general specifications of CPWD shall be followed for which nothing extra shall be paid. However the specification should be got approved from the Architect before commencement of work.

- a) After signing the Contract, the contractor will be given free of charge three prints of all working drawings. The contractor shall make at his own expense any additional copies he requires. One copy of the drawing furnished to the contractor as aforesaid shall be kept by the contractor at site and the same shall, at all reasonable times be available for inspection and use by the Architect and his representatives any by any other person authorized by him in writing.
- b) Such further drawings and instructions including revisions, as the Architect may furnish to the Contractor shall form part of this contract.
- c) Only figured dimensions and detailed drawings shall be followed. The Contractor shall verify all dimensions in the field before any work is started and obtain instructions of the Architect in case of any discrepancy.
- d) The Architect with approval of the project manager shall have power and authority to supply to the Contractor from time to time during the progress of the work, such further drawings and instructions as shall be necessary for the purpose of proper and adequate execution and maintenance of work and the Contractor shall carry out and be bound by the same.

Consultant/Architects Status and Decisions



-
- (a) Status: The Architects shall have general supervision and direction of the work. He has authority on behalf of the Employer to stop the work whenever such stoppage be necessary to ensure the proper execution of the work. The architect shall be the interpreter of the conditions of contract and the judge of its performance subject to the approval of the Project Manager.
- (b) Decisions: The Architect shall, within a reasonable time, make decisions on all claims of the contractor and on all other matter relating to the execution & progress of the work or the interpretation of the contract documents. The decisions, opinion direction of the Architect with respect to all or any of the following matters shall be referred to the Project Manager and decision so taken shall be final & binding to the contractor.
- i. Variation or modifications of the design.
 - ii. The quality or quantity of works or the additions/alterations or omissions or substitutions of any work.
 - iii. Any discrepancy in the drawings or between the drawings and or specifications.
 - iv. The removal and / or re-execution of any work by the contractor.
 - v. The dismissal from the work of any persons employed therein.
 - vi. The opening up for inspection of any work covered up.
 - vii. The amending the making good of any defects under defects liability period.
 - viii. Approval of materials and workmanship.
 - ix. The contractor to provide everything necessary for the proper execution of the work.
- (c) The authorities so conferred in the architect vide various clause above shall be subject to review of the Project Manager at any time whenever desired his decision shall binding under the contract.
- (d) The employer shall be at liberty to take over the project at any time get the work executed directly under the supervision of Project Manager. The power vested in the Architect under this tender shall automatically be vested in the Project Manager thereafter.
- (e) In the event of any dispute under this contract or between the Architect & the contractor, the speedier decision will be final in the matter. In case the contractor refer the matter to the Project Manager for speedier decision.
- (f) Dismissal:

The contractor shall on the report of the Architects immediately dismiss from the works within 24 hours any person employed thereof by him, who, in the



opinion of Architects be incompetent or misconducts himself and such person shall not be re-employed on the works without the permission of the Architects.

Extent of Contract

The contractor shall supply at his own cost all material implements, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not and which be necessary for the purpose of satisfying of conditions he is entitled to be satisfied which he is entitled to require together with carriage therefore to and from the work. The contractor shall also supply survey instruments and other materials necessary for the purpose of setting out works, and counting weighing and assisting to the measurement or examinations at the site any time and from time to time of the work material, falling his so doing the same be provided by the engineer-in-charge at the expense of the contractor and the expenses be deducted from any money due to the contractor under the contract from his security deposit or the proceeds of sale thereof. The contractor shall also provide a sufficient portion of fencing and lights required to protect the public from accident, and shall be bound to bear the expenses of defense brought by any person for injury sustained owing to neglect of the above precautions and to pay any damage and costs which be awarded in any such suit, action or proceedings to any such person or which with the consent of the contractor be paid to compromise any claim by any such person. In no case, the employer shall be as a party to any such claim/claims and the contractor shall indemnify the employer against any claim for any person on this account.

Sufficiency of Tender

The contractor shall be deemed to have satisfied himself before tendering to the correctness and sufficiency of his tender for the work and of his prices for the work and of his prices stated in the schedule, which shall, except in so far as it is otherwise provided in the contract, cover all his obligations under the contract and all matters and things necessary for the proper completion and maintenance of the work.

Assignment or Sub Letting of Contract

The contractor shall not assign the contract or any part thereof or any benefit or interest therein or there under or any claim arising out of the contract to any other party without the prior written consent of the employer.

Power to make Alterations

Architect shall have power to make any alterations or additions to the stipulated specifications, drawings, designs, and in striations that my appeal to him to be necessary or, advisable during the progress of the work and the contractor shall have no claim for compensation on account of such alterations or additions. The contractor shall be bound to carry out the work in accordance with any instructions which be given to him in writing signed by the Architect and such alterations shall not invalidate the contract and any additional work which the contractor be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main



work and at the same rates as are specified in the tender for the main work. The time for the completion of the work shall be extended in the proportion that the additional work bears to the original contract work and the certificate of the Architect/Project Manager shall be conclusive as to such proportions.

Works Subject To Approval Of Architect

All works to be executed under the contract shall be subject to approval of the Architect who shall be entitled to direct at what point or points and in what manner they are to be commenced and from time to time carried on.

Contractors office and Stores

All offices, sheds and stores required by the contractor shall be enacted at his own cost with the prior approval of the Project Manager or his representative and shall be dismantled and removed upon the completion of the work if so directed within 7 (seven) days of the issue of such intimation.

Urgent Repairs and Urgent works

If by reason of any accident or failure or other event occurring to or in connection with the work or any part thereof either during the execution of the work or during the period of Guarantee, any remedial or other work or repair shall in the opinion of Project Manager be urgently necessary for security and the contractor is unable or unwillingly at once to do such work or repair, the employer may on its own get the work done/remedied/repared as the Resident Engineer may consider necessary. If the work or repair so done by the employer is such, which, in the opinion of the Architect the contractor was liable to do at his own expense under the contract, all costs and changes incurred by the employer in doing so shall on demand be paid by the contractor to the employer or may be deducted by the employer from any money due or which may become due to the contract. Provided always that the resident engineer shall soon after the occurrence of any such emergency as may be reasonable notify the contractor thereof in writing.

DIRECTION FOR EXECUTION OF WORK : Setting outs

The contractor shall be responsible for the true and proper setting out of the works in relation to the original points, lines and levels of reference given by the Architect in writing and for correctness subject as above mentioned of all the positions, levels dimensions and alignments of all parts of the work and for the provision of all necessary instruments, appliances and labour in connection therewith. If at any time during the progress of the work any error shall appear or arises in any part of the work, the contractor on being required to do so by the Project Manager shall at once inform the architect or their representatives. The checking of the work by the Architect/representative shall not in any way relieve the contractor from his responsibilities of carrying out the work as per the best practices.

Work to be to the satisfaction of the Architect

The contractor shall execute, complete and guarantee the work in accordance with the contract to the satisfaction of the architect and shall comply with adhere to their instructions & directions concerning the work.



Engagement of Labour

The contractor shall employ labour in sufficient numbers either directly or through subcontractors, where such sub-letting is permitted to maintain the required rate of specified in the contract and to the satisfaction of the architect. The contractor shall not employ in connection with the works any person who has not completed his fifteen years of age or as per the provisions of respective laws.

The contractor shall comply with the provisions of the payment of Wages Act, 1936; Minimum Wages Act, 1948; Act, 1947; Maternity Benefit Act, 1961 and Mines Act, 1938, Labour Contract (Regulations & Abolishing) Act or Rules, or any modifications thereof or any other law relating thereto and rules made there under time to time.

The contractor shall indemnify the employer against any payment to be made under and for observance of the Regulation aforesaid without prejudice to his right to claim indemnify from his sub-contractors.

The contractor shall provide and maintain at his own expenses all rights, guards, fencing and watching when and where necessary or required by the Resident Engineer for the protection of the works or for the safety and convenience of those employed on works or the public.

Disruption of Progress

The contractor shall give written notice to the Architect whenever planning or progress of the works is likely to be delayed or disrupted unless any further drawings or order, including a direction, instruction or approval is issued by the Architect within a reasonable time. The notice shall include details of the drawing or order required and by when it is required and of any delay or disruption likely to be suffered if it is late.

If, by reason of any failure or inability of the Architect to issue within a time reasonable in all the circumstances any drawings or order requested by the contractor and the work suffers delay then the architects shall take such delay into account in determining any extension of time to which the contractor is entitled under provisions of contract hereof, however no other compensation will be admissible on this account.

Rectification of Defects

If, it shall appear to the Architect or his representative in -charge of the works that any work has been executed with unsound, imperfect or un-skillful workmanship or material or any inferior description, the contractor shall, on demand, in writing from the Architect specifying the work material or articles complained of shall rectify or remove and reconstruction work so specified in part, as the case may require.

Variation



In case the quantity of any item of the work executed increases by more than deviation limit from the quantity given in the tender document, the rate of such item would be settled as under:

- a) Rate of the item worked out as per market rate
- b) Rate of the item quoted by the contractor.

The rate of such item would be lower of the two rates mentioned above.

The contractor shall submit the samples of various material for the approval of the Architect & Client. The contractor shall use the material only after the approval of the Architect/Client. The verification of the material shall be done on random base during the progress of the work in either the following manner :

- a) Random samples would be picked up during execution of work from site & if decided by the Architect/client, it would be sent to one of the approved laboratories for test & quality check. The cost of such tests would be borne by the client.
- b) The Architect/client may direct the contractor to submit the challan of delivery of the material brought at site. It would be on Random based. The Architect may also direct the contractor to submit the copy of the test/verification certificate provided by the manufacturer of that particular material.

Free Access to work site

The contractor shall provide all necessary and reasonable facilities and free access to the works and his records at site of work to the Architects, Resident Engineer and their representatives. He shall provide facilities and space to the satisfaction of the Architect or his representative for inspection of any part of work.

Rectification of Defects

if, it shall appear to the Architect or his representative in-charge of the works that any work any has been executed with unsound, imperfect or un-skilful workmanship or material or any inferior description, the contractor shall, on demand, in writing from the Architect specifying the work material or articles complained of shall rectify or remove and reconstruction work so specified in part, as the case require.

Inspection of work

All work under or in course of execution or executed in pursuance of the contract shall at all times be open to inspection and supervision of the Architect or his representative and the contractor shall at all times with reasonable notice or the intention of the Architect or his representatives to visit work shall have been given to the contractor, either himself be present to receive orders and instructions, or have responsible agent duly accredited in writing present for that purpose. Orders to the contractor's agent shall be given to the contractor himself.

Preparation of Implementation Programme Schedule



As and when sufficient planning information is available, the contractor in consultation with the Architect shall prepare a programme schedule of the activities. Contractor should prepare bar-charts & articles path method analysis of the light of the tendered quantities and their rates respectively. Under no circumstances shall this schedule be prepared later than one week of finalisation of contract. Throughout the work, all programmes, schedules and charts shall be revised wherever any significant change occurs. The contractor shall also submit weekly progress chart to the Architect.

Site Order Book

The contractor shall maintain a Site Order Book at the site of the works wherein the instructions of the Architect/Project Manager or their representatives shall be reasoned. The site order book shall be the property of the employer and the instructions recorded therein shall be deemed to have the same force and effect as if they had been given to the contractor himself. The contractor or his representative on the site must sign the book in taken of his having persuade the orders given therein.

Hindrance Register

A Hindrance Register shall be maintained at the site of work wherein the contractor shall notify the items affected and the execution of work, the date on which the delay was cleared. These entries shall be initiated by the Project Manager/Architect as well.

Suspension of Work

The contractor shall on the written order of Project Manager on written recommendation of the architect suspend the progress of the work or any part thereof for such time or time and in such a manner as the Project Manager consider necessary and shall during such suspension properly protect and secure the work as considered necessary in the opinion of the Project Manager or their representative- in-charge of the work. No compensation shall be payable to the contractor on what so ever account for the suspension of work.

Extension of time for completion

If the contractor shall desire an extension of the time for completion of the work, on his having been unavoidably hindered in its execution or on any other ground, he shall apply in writing to the architect within three days of the date of starting of the hindrance on account of which he desires such extension as aforesaid. The architect in consultation with employer shall, if, in his opinion, will authorise, such extension of time, if any, asin his opinion be necessary or proper extension granted shall be without prejudice to the right of the Employer to recover compensation for delay as per provisions of below mentioned para.

Liquidated Damages for Delay

The times and date stipulated in the contract for the completion of the work or any part or stage thereof shall be deemed to be the essence of the contract.



The work shall, throughout the stipulated period of the contract, be carried out with all diligence. If the contractor fails to complete the work within the time prescribed or within the extended time under the contract, he shall pay to the Employer on demand amount without prejudice to other rights and remedies the Employer have against the contractor, a sum as mentioned in the tender document as liquidated damages for such fault. If the work remains unfinished after the stipulated date of completion provided that the total liquidated damages payable shall not exceed a sum as mentioned in the tender document as liquidated damages. The Employer, without prejudice to any other method of recovery, deduct the amount of such damages from any money due or which become due to the contractor. The recovery or deduction of such damages shall not relieve the contractor from any obligations and liabilities under the contract.

Defects Liability Period

The contractor shall be responsible to make good and remedy at his own expense within such period as be stipulated by the employer any defect which develop or be noticed before the expiry of defects liability period as mentioned in the tender document from the date of completion and intimation of which has been sent to the contractor within seven days of the expiry of the said period.

If the contractor or his work people, or servants shall break, deface, injure, or destroy any part of a building, or interiors, then the contractor has to rectify the same part at his own expenses to the satisfaction of the Architect.

Approval of Materials

The contractor would bring samples of necessary materials as per the directions given & would get them approved prior to execution of work.

SECURITY DEPOSIT

The employer will, at the time of making any payment to the contractor for work done or supply made under the contract deduct 10% of Gross value of each interim bill.

The earnest money deposited shall be adjusted against this security deposit. The security deposit shall be released on the expiry of defects liability period stipulated in the contract.

All compensations or other sums of money payable by the contractor to the employer in terms of this contract be deducted from, or paid by, the sale of a sufficient part of his security deposit, or from any sums which become due to the contractor by the employer on any account whatsoever, and in the event of his security deposit being reduced by reason of any such deduction or sale as aforesaid, the contractor shall within ten days. Thereafter make good in demand draft, endorsed in favour of the employer as aforesaid any sum or sums which have been deducted from, or raised by sale of his security deposit or any part thereof.

Forfeiture of Security Deposit

The above said security deposit shall be liable to forfeiture wholly or in part at the sole discretion of the Employer if the contractor fails to carry out the work or



perform or observe any of the conditions of the contract or furnish any false/fake/forged information/documents from the date of the submission of tender documents and till virtual completion of work.

Interest on the Security Deposit

No interest would be payable by the employer to the contractor on the security held in deposit.

Responsibilities for the Structural Adequacy

The contractor shall comply with the provisions of the contract and with due cares and diligence, execute and maintain the work and provide all labour, including supervision of all works, structural plans and other things whether of temporary or permanent nature required for such execution and maintenance in so far as the necessary for providing these, is specified or is reasonably inferred from the contract. The contractor shall take full responsibilities for the adequacy, suitability and safety at site of all the works.

MEASUREMENT AND PAYMENTS

All bills supported with measurement details shall be submitted by the contractor fortnightly to the Architect for all works executed in the previous period and the Architect/Project Manager or his representative shall verify the requisite measurement for the purpose of having the same verified for the claim as far as admissible, if possible before the expiry of 45 days from the presentation of the bill.

All measurements to be taken in duplicate and all bills shall be submitted in triplicate along with a contractor's copy of each.

Final Bill

Final bill supported with consolidated measurement of the full work executed shall be submitted by the contractor within 1 month of completion of work.

When the final bill has been verified and corrected, the architect will give seven days' notice to the contractor to countersign the bill in token of acceptance, the contractor shall countersign the bill within the above seven days or intimate in writing his intention to dispute. If the contractor fail to take appropriate action as above within the period prescribed, the bill finalised by the architect or his representative shall be final and binding on the contractor and the contractor shall have no right to dispute the same.

Claim for Interest

No claim for interest will be entertained by the Employer with respect to any moneys or balances which be in its hands owing to a dispute between itself and the contractor or with respect of any delay on the part of the employer in making interim or final payments or otherwise.

Rates for extra Additional, Altered or Substituted work

The rates for additional, altered or substituted work shall be worked out in accordance with the following provisions in their respective order.



- i. If the rates for similar additional, altered or substituted work and directly available in the contract for the work, the contractor is bound to carry out the work at the same rates as are available in the contract for the work.
- ii. If the rates for additional, altered or substituted work are not directly available in the contract for the work the rates will be derived from the rates for a similar class of work as are specified in the contract for the work.
- iii. If the rates for the altered, additional or substituted work cannot be determined in the manner specified in sub-clause (i) to (ii) above, then the contractor shall within three days of the date of receipt of order to carry out the work, inform the Architect of the rate which it is intended to charge for such works supported by analysis of the rate or rates claimed (CPWD Analysis). Rates finalized and approved by the Architect on the basis of these details will be final and binding. However, the architect by notice in writing will be at liberty to cancel his order to execute such work and arrange to carry it out in such a manner as he deem advisable, but under no circumstances shall the contractor suspend the work once ordered in writing on the plea of non - settlement of rate.

Reimbursement of Variation in Price

Prices and rates quoted by the bidders shall be considered as firm for the complete work and entire duration of the contract. No claim for extra payment due to any rise in rates of raw material and labour or due to whatsoever reasons shall be considered, not even for extended period of completion.

Quality of Work

The contractor shall guarantee that the materials and workmanship are the best of their respective kinds for the service intended and that all items of work will be free from all inherent defects in workmanship and materials. He shall also guarantee that the works will not fail in any respect due to quality of materials, workmanship and methods of construction.

The specifications assume a proper degree of skill on the part of contractor and workmen employed. The contractor shall consult the Architect or his representative, whenever in his judgment variation in the methods of construction or in the quality of material would be beneficial methods of construction or in the quality of material would be beneficial or necessary to fulfill the guarantee called for. Such variations may be made by the contractor only when authorised by the architect.

If during the Period of Guarantee or defects liability period, as defined in the tender document, any work or material shall fail in any respect to meet the above guarantee, the contractor shall replace such work or material in a condition which will meet the above guarantee, immediately.

Cost of Execution of work or repair etc.



All work of repair shall be carried out by the contractor at his own expense if the necessity thereof shall in the opinion of the Architect be due to the use of materials or workmanship not in accordance with the contract or on account of neglect or failure on the part of the contractor to comply with any obligation expressed or implied on the contractor's part under the contract.

Remedy on Contractor's failure to carry out the work required

If the contractor shall fail to do any such work as aforesaid required by the architect the employer shall be entitled to carry out such work which the contractor should have carried out, at the contractor's own cost. The employer shall be entitled to recover from the contractor the cost thereof or deduct the same from any money due or that becomes due to the contractor.

Certificate of completion of works

On completion of the work, the contractor shall be furnished with a certificate, but not such certificate be given nor shall the work be considered to complete until the contractor shall have removed from the area of the premises (to be distinctly marked by the Architect/Project Manager in the site plan which, the work shall be executed) all scaffolding, surplus materials and rubbish and clean the dirt from all wood work, doors, windows, walls, floors or other parts of any building, in or upon which the work is to be executed, or of which he has had in possession for the purpose of the execution hereof. If the contractor shall fail to comply with the requirements of the clause as to the removal of scaffolding, surplus materials and rubbish and cleaning off dirt on or before the date fixed for the completion of the work, the architect at the expense of the contractor remove such scaffolding, surplus materials, and the contractor shall forthwith pay the amount of all expense so incurred, and shall have no claim in respect of any such scaffolding or surplus materials aforesaid, except for any sum actually realized by the sale thereof.

Also the completion certificate will be issued to contractor only after submission of as built drawings (furnishing, flooring, false ceiling, HVAC, all electricals, fire - fighting, etc.) as per architect's approval.

Contract Valid during Guarantee Period

This contract shall remain valid and in force until the expiry of Guarantee /defects liability period from the date of issue of virtual completion certificate

Rescinding Contract

In any case in which under any clause or clauses of this contract the contractor has rendered himself liable to pay compensation amounting to the whole of his security deposit in hand of employer (whether paid in one sum or deduced by instalments) the architect on behalf of the employer shall have power to adopt any of the following course, as deemed best suited to the interests of employer.

- a) To rescind the contract (of which rescission notice in writing to the contractor under hand of the architect shall be conclusive evidence), and in which case the security deposit of the contractor shall stand forfeited and be absolutely at the disposal of the employer.



- b) To employ a contractor paid by the employer and to supply materials to carry out the work, or any part of the work, debiting the contractor with the cost of the labour and the price of the materials (of the amount of which cost and price certificate of architect shall be final and conclusive against the contractor) and crediting him with the value of the work done, in all respects in the same manner and at the same rates as if it has been carried out by the contractor under the terms of the contract. The certificate of the architect as to the value of the work done shall be final and conclusive against the contractor.
- c) To measure up the work of the contractor, and to take such part of the work of the contractor as shall be unexecuted out of his hands, and to give it to another contractor to complete in which case any expenses which be incurred in excess of the sum which would have been paid to the original contractor if the whole work has been executed by him (of the amount of which excess certificate in writing of the architect shall be final and conclusive) shall be borne and paid by the original contractor and be deducted from any money due to him by employer under the contract or otherwise, or from his security deposit or the proceeds of sale thereof, or a sufficient part thereof.
- d) In the event of any of the above courses being adopted by the architect, the contractor will have no claim to compensation to any loss sustained by him by reason of his having purchased any materials, or entered into any engagements made any advances on account of execution of the work or performance of the contract. And in case of the provisions aforesaid, the contractor shall not be entitled to be paid for any work actually performed under this contract unless and until the architect shall have certified in writing the performance of such work and the value payable in respect and he shall only be entitled to be paid the value so certified.

Termination of the Contract

If at any time after the commencement of the work the employer for any reason whatsoever does not require the whole or part thereof as specified in the tender to be carried out, Architect/ Project Manager shall give notice in writing of the fact to the contractor who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage, which would have derived from the execution of the work in full, but which he did not derive in consequences the full amount of the work not having been carried out, neither shall he have any claim nor compensation by reason of any alterations having been made in the original specification, or the designs and instruction on which shall involve any containment of the work originally contemplated.

Jurisdiction

The contractor and its operation shall be governed by the law of India for the time being in force, irrespective of the place of delivery of materials the place of execution of work or place of payment under this contract shall be deemed to have been entered into at Chennai.



Liasoning & Co- ordination with Local Municipal Authorities

The contractor has to liason and takes any clearance from local authorities for approval to start renovation and during renovation of work. He has to take also any clearance from Fire Service if needed and NOC and completion certificate from concerned local authorities, if needed. Only statutory fees will be reimbursed by NAFED on production of receipts.

Bye Laws of Local Authorities

The contractor shall conform to the provisions of any Government Acts/rules/guidelines etc which relate to works and to the regulations and bye laws of any local authorities. The contractor shall give all such notices required by the said Act or Laws, etc., and pay all fees payable to such authorities and allow for these contingencies in his tendered rates including fees for encroachment, stacking charges, costs of restorations, etc., and all other fees payable to the local authorities. The contractor shall keep the employer indemnified against all penalties and liabilities for every hand of breach of any such Act, Rules, Regulations or Bye-laws.

Contractor shall comply with all laws and statutory regulations dealing with the employment of labour such as:

- i. The payment of wages Act, 1936
- ii. The Minimum Wages Act, 1938
- iii. The Workmen Compensation Act, 1923
- iv. The Contract Labour (Regulations & Abolishing) Act.
- v. The employer's liabilities Act, 1938
- vi. Industrial Dispute Act, 1938
- vii. Maternity Benefit Act, 1961
- viii. The Employees State Insurance Act, 1948
- ix. Child labour Prohibition and Regulation act 1986

Safety code, labour welfare Act or rules or any modification thereof any other laws and regulations framed by the Competent Legislative Authorities from time to time.



SECTION IV – SPECIAL CONDITIONS OF THE CONTRACT

The service contract shall be governed by the following special conditions of contract:

Insurance for Works

The contractor at the time of signing the contract or before commencing the execution of work, without limiting his obligations and responsibilities shall insure the works at his own cost and keep them insured until the virtual completion of the contract against all risks and acts of God including Fire, Theft, Riots, War, Floods etc. with a Nationalized Insurance company in the joint names of the employer and the contractor (the name of the former being placed first in the policy) for the full amount of the contract. Such policy shall cover the property of the employer and fees for assessing the claim and in connection with its services generally therein and shall not cover any property of the Contractor or of any sub-contractor or employee. Such insurance shall be for a minimum value of Rs. 1.0 lakhs (Rupees One Lakh only).

The contractor shall deposit the policy and receipt for the premiums with the employer within seven (7) days, from the date of signing of the contract/commencement of the execution of the work or unless otherwise instructed by the employer. In default of the contractor insuring as provided above, the employer on his behalf shall insure and deduct the premiums paid from any moneys due on which become due to the contractor. The contractor shall as soon as any claim under the policy is settled on the work reinstated by the Insurance office should elect to do so, proceed with all due diligence with the completion of the works in the same manner as through the misfortune/accident had not occurred and in all respects under the same conditions of the contract. The contractor in case of rebuilding or reimbursement after accident shall be entitled to such extension of time for completion, as the employer deems fit.

Insurance in respect of damage to persons and property

- a. The contractor shall be responsible for all injury to persons, animals or things and for all structural and decorative damage to property which arise from the operation or neglect of himself or of any approved sub-contractor's or employees, whether such injury or damage arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out of this contract. The clause shall be held to include any damage to buildings, whether immediately adjacent or otherwise, and any damage to roads, streets, foot paths, bridges and works forming the subject of this contract by frost or other inclemency of the weather. The contractor shall indemnify the employer and hold him harmless damage to persons or property as aforesaid and also respect of any claims made in respect of injury or damage under any Acts of Government or otherwise and also in respect of any award of compensation of damages consequent upon such claims.
- b. The contractor shall reinstate all damages of every sort mentioned in this clause, so as to deliver up the whole of the contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties.



- c. The contractor shall indemnify the employer against all claims which be made against the employer by any member of the public or other third party in respect of works in consequence thereof and shall at his own expense arrange to effect and maintain, until the virtual completion of the contract, with any Nationalized Insurance company in the joint name of the employer and the contractor against such risks and deposit such policy or policies with the employer from time to time during the currency of this contract. The contractor shall similarly indemnify the employer against all claims which be made upon the employer whether under the Workman's Compensation Act or any other statute in force during the currency of this contract or at common law in respect of any employee of the contractor or any sub-contractor and shall at his own expenses effect and maintain with an approved office a policy of Insurance in the joint names of the employer and the contractor against such risks and deposit such policy of policies with the employer and the contractor against such risks and deposit such policy or policies with the employer from time to time during the currency of the contract. The contractor shall be responsible for anything which be excluded from the insurance policies above referred to and also for all other damages to any property arising out of and incidental to the negligent or defective carrying out of this contract. He shall also indemnify the employer in respect of any costs, charges or expenses arising out of any claim or proceedings and also in respect of any award of or compensation of damages arising there from.
- d. The employer shall be at liberty and is empowered to deduct the amount of any damages, compensation costs, charges and expenses arising or occurring from or in respect of any such claim or damage from any sum or sums due to or become due to the contractor including the security deposit.
- e. If the contractor fails to comply with the terms of these conditions, the employer insure the works and any other item/article associated with or arising from same and any risk arising as a consequence of this contract and deduct the amount of the premiums paid from any moneys that be or become payable to the contractor or at the option, not release running payment to the contractor until the contractor shall have complied with the terms of this condition.
- f. Such insurance whether effected by the employer or the contractor will not limit or bar the liability and obligation of the contractor to deliver the works to the employer completed in all respects according to the contract. In case of loss or damage due to any of the aforesaid clause, the moneys payable under any such insurance shall be received and retained by the employer until the works are finally completed and such moneys shall then be credited to the contractor in final settlement of accounts after setting off any money payable to the employer or recoverable by the employer.
- g. No incomplete works shall be accepted and nothing shall be paid to the contractor. However the part rates be allowed to the contractor for the executed works which shall be treated as advance and the same be recovered if the works left incomplete .



-
- h. The main contractor has to arrange water and electricity at his own expenses at the work site for all the legitimate works by the employer. The contractor will, however, draw water/electricity from or designated central point with his own pipes, cables and distribution system through valves/switches including providing small water storage tank etc. without causing any spillage and misuse. However, in case of shortage or breakdown of electricity or water supply the contractor shall make alternative arrangements at his own expense so as to ensure timely progress and completion of works.
- i. The contractor shall ensure uninterrupted supply of water, electricity, access to staff and disposal of sewage/waste to be maintained for existing occupants/within the building premises. The employer does not guarantee adequacy or continuity of electricity and water supply.
- j. AGENCY FOR ELECTRICAL INSTALLATIONS: All works under Electrical services of Bill of Quantities shall be carried out by licensed contracting agencies.



SPECIAL CONDITIONS OF CONTRACT FOR AC WORK

AIR-CONDITIONING WORK

Work shall be done as per CPWD and ISI Specifications for air -conditioning 1977 amended up to date.

- I. In the event of any discrepancy between the Specifications as mentioned under Technical Specifications and as given in the Specifications as mentioned above. The specifications under Technical specifications shall prevail.
- II. The relevant latest IS Specifications, Codes of Practice shall be followed if the Specifications for the item is not available in the Specifications as mentioned above or in Technical Specifications in the agreement.

In case of any discrepancy, the decision of the Architect shall be final and binding.

SHOP DRAWINGS

The successful bidder shall have to submit all shop drawings within 7 days in stages from the date of issue of letter of intent to the Consultant for approval.

The list of shop drawings shall be as follows:

- a. Detailed layout plans for each area.
- b. Refrigerant Piping routes.
- c. Electrical panel and control scheme.
- d. Any other detailed drawings required for the system.
- e. Condenser/Evaporative unit location.
- f. Foundation Details.

Each tender should be signed by the person having the power of attorney to sign. Bill of quantities should be signed and returned. If the tender is made by or on behalf of a Company incorporated under the Companies Act of 1956, it shall be signed by its Executive, authorized to sign or on their behalf shall bear the official seal of the Company and accompanied by a Photostat copy of Power of Attorney. If the tender is made by an individual, it shall be signed with his full name and address, if made by a Firm, it shall be signed under the partnership of the Company name by a Member of the Firm, who shall sign his own name and give the name and address of each Partner / Directors of the Firm and attach the copy of the Power of Attorney with the tender.

The contractor must acquaint / acquire themselves with the site conditions, means of access to the work, local conditions and all matters pertaining thereto. It shall be the contractor's responsibility to obtain all necessary information required for quoting the above tender and for entering into a contract. The detailed drawings and specifications available with the document / with the owner must be studied and examined carefully by the bidders before submitting their offers. This site is finished with all light fixtures, fittings and False ceiling and is ready to move in. The contractor should take good care of these, while installing his equipment. Any damage to fixtures, fittings, False ceiling, Painting of the walls etc. shall have to be rectified by contractor at his own cost and contractor is to hand over the building in the same condition.



The successful bidder shall prepare required number of copies, as desired by the owner/consultant (duly bound) of agreement on a stamp paper within two weeks from the date of approval of draft copy of agreement by the owner.

The following documents shall generally constitute the contract agreement:

- a. Invitation to tenders.
- b. Special conditions of contract, tender documents and drawings.
- c. Complete correspondence with the successful bidder and owner shall be consolidated in one letter by the bidder.
- d. Any other document necessary for completion of contract agreement.

The bidders shall submit along with their tender a list of few important jobs giving date of order, year of completion/ commissioning of HVAC, approximate delay in completion/ commissioning of jobs, reasons of delay by them within last three years.

The rates quoted in the tender shall include all charges for civil, scaffolding, hiring charges for any tools/ equipments etc., required for execution of the contract. The rates shall be inclusive of excise duty, sales tax, octroi or any other duties or fees levied by Govt. or any Public or Local Bodies. The assessable value, quantum/ rate of excise duty included on each excisable equipment should be indicated separately in the price bid.

The quoted rates shall be on works contract basis and subject to statutory variation in sales tax on work contract or on rate of excise duty. In case assessable values are increased by the manufacturer during the currency of contract, the client shall not pay any increase in quantum of excise duty on account of change of accessible value. No foreign exchange and license shall be arranged by the owner in case of imported items, material or equipment.

Calculations made by the contractors should be based upon probable quantities of the several items of work, which are furnished for their convenience in the 'Bill of Quantities'. It must be clearly understood that quantities are liable to alteration, by omission, deletion or additions at the discretion of the owner. The detailed bill of quantities is given for the guidance of the contractor only.

It shall be contractor's full responsibility to check and ascertain the correct quantities and quote accordingly. The contract shall be on works contract basis and the owner reserves the right to add / delete any items of work during the currency of contract.

BAR CHART AND CASH FLOW CHART

The contractor shall prepare a bar chart and cash-flow chart in consultation with the owner and shall strictly adhere to the same. The progress and the completion of the work shall be in accordance with the bar chart and will form part of the agreement. The said schedule of work/ bar chart will be subject to conditions of contract related to extension of time.

SUB-CONTRACTORS

The successful contractor shall take written consent from the owner before appointing any sub-contractor, however, the total responsibility of the job conforming to specifications carried out by sub-contractors shall be owned by the contractor.



PERFORMANCE BOUND CONTRACT

The contract will be a performance bound contract and therefore the tenderers shall make their independent checks for heat loads, selection of equipments etc. Capacities of various equipments specified in the tender documents are tentative and minimum acceptable. The drawings, if enclosed with the tender documents, shall be tentative and for tendering purpose only.

TRAINING OF PERSONNEL

The contractor shall impart training to the owner's appointed staff free of cost during erection and commissioning of HVAC at site.

GUARANTEE

The contractor shall guarantee the performance of complete air -conditioning system for a minimum period of 12 months from the date of virtual completion. The tenderer shall guarantee the air-conditioning system to maintain space conditions, as mentioned in the tender documents. Tenderers shall also guarantee the performance of various equipments individual and jointly. The same shall not be less than 3% of the specified ratings when working under operating conditions for the complete installation. In case the A.C cannot be commissioned due to reasons not attributable to the contractor, a bank guarantee of suitable amount, as agreed by the owner, shall be furnished by the contractor and payment due against commissioning shall be released thereafter. However, the commissioning of the A.C shall be done by the contractor and all tests at site shall be conducted as per tender documents. During guarantee period, loss of refrigerant and oil, if any, shall be borne by the contractor. The capacity/ ratings of various equipments in this contract given are minimum acceptable and for guidance purpose only. In case of short-fall, the contractor shall replace / modify equipments for achieving desired parameters without any extra cost to owners or employer

TESTING EQUIPMENTS

The A.C units shall be inspected by the consultant at the manufacturer's works prior to dispatch. All expenses towards the above pre dispatch inspection shall be borne by the contractor and quoted price should include the same.

All testing equipments, tools, scaffolding and ladder etc. that may be required for taking measurements or testing shall be arranged and supplied by the contractor at his own cost.

REPAIR / REPLACEMENT OF PARTS DURING GUARANTEE

Any defects or other faults which may appear within defects liability, guarantee period of 12 months from the date of handing over of the A.C (except for normal wear and tear) arising in A.C units for material or workmanship not in accordance with the contract shall be borne by the contractor.

All entries should be filled in English only made by hand clearly written in ink. All corrections should be initialed by bidders as many times as the corrections occur.

All rates should be filled in figures and sub-totals and grand-totals in figures and words both.



On tender scrutiny, if differences are found in rates given by the bidder in words and figures or in sub-total, grand-total amount is found; the procedure for deriving the final value shall be as follows:

The item rates quoted by bidder shall be taken as correct in cases where amount worked out of any item does not correspond to the rate written in figures or words.

For items not quoted by the bidder, the highest rates quoted by other bidder shall be taken as correct for such item for loading purposes and lowest rates for execution purposes.

Bids not submitted on prescribed form are liable to be rejected. Bidders are advised to quote offer as per bill of quantities. No alternate offer is acceptable. Any alteration/ cutting/ additions made in the tender documents shall lead to disqualification of the bid without any prejudice.

Any comments on technical or commercial conditions should be done clause wise.

The acceptance of bid shall be intimated to the successful bidder through an award letter and thereafter formal agreement shall be entered within the time specified in the award letter.

The owner shall deduct TDS at source as applicable or statutory deductions if any to be made at source and certificate against deductions shall be given to the contractor by the owner.

POWER AND WATER SUPPLY FOR ERECTION PURPOSES

The contractor will arrange for electricity and water supply at his own expenses. The Employer will not take any responsibility to arrange for electricity and water supply. Also no excuses on grounds of water and electricity supply will be entertained for hindrance in work.

STORAGE AT SITE

Space if available, can be used by the contractor for storage of equipments/ materials brought to site for execution of the work. However, watch and ward of the same shall be at contractor's risk.



CONDITIONS AND SPECIFICATIONS FOR ELECTRICAL WORKS

1. The work shall be carried out as per CPWD Specification 2007 Part-I (internal) & Part - II 2008 (external) both amended up to date. All the installation shall comply with the requirement of Indian electricity Rule 1956 amended up to date. If the specifications for any item is not available in the CPWD specifications cited above, relevant IS specifications shall be followed. In case ISI specifications are also not available, the decision of the Engineer-In-charge given in writing based on acceptable sound Engineering Practice and local usage shall be final and binding on the contractor.
2. All the material to be used on the work shall be of superior quality and shall have to be got approved from the Engineer-In-Charge before use at site.
3. The layout for running of the conduits, positions of switches fitting etc. shall have to be got approved from the Engineer-In-Charge before execution of the same.
4. Suitable size of TW block duly varnished shall be provided for FI. fittings for which nothing extra shall be paid.
5. All the conduit to be laid shall be provided with fix wire or not less than 16 SWG for which nothing extra shall be paid.
6. All the switches to be provided for lighting/ fans/ light plug/ power plug/ call bell etc. shall be of modular type of superior quality.
7. The switchboards shall be provided with decorative sheet of approved colour and quality, which shall be got approved from the Engineer-In-charge before use at site.
8. The contractor shall make his own arrangement for the safe custody/ storage of his material. Breakage, damage if any done during the storage/ execution, the same shall be replaced/ rectified by the contractor at his own cost.
9. The contractor is bound to sign the entry/ entries made by the Engineer-In-Charge or his representative in the site order book time to time.
10. Good workmanship is an essential requirement for compliance with the rules & specifications.
11. The entire installation shall be at the risk and responsibility of the contractor until these are tested and handed over to the department.
12. Earthing loop earthing shall invariably be along as per CPWD specifications.
13. Notwithstanding the schedule of quantity. All items of inter-related work considered necessary to make installation complete and separate deemed to be included shall be provided by the contractor at no extra cost.
14. Contractor has to supply the layout / circuit drawings of installation after the completion of work.
15. The cover of all junction boxes shall be of bakelite sheet.
16. The tenderer shall submit a sample board, incorporating in it the samples of all electrical wires, conduits etc. proposed to be used for approval of Engineer-in-charge before commencement of work. No extra payment shall be given for the same.



17. Any damage caused to Building as a result of execution of electrical work shall be responsibility of the electrical contractor. The damage if so caused shall be made good by the contractor promptly at his own cost to the entire satisfaction of the Engineer-In-charge.

18. Embedding of earth electrode shall be done in the presence of Engineer-in-charge for his authorized representative.

19. The contractor shall submit the completion plan separately for each floor for one particular building only in triplicate on Blue print showing the route of sub-mains etc.

20. The Engineer-in-charge will be at liberty to get the work inspected through the C.T.E. or any other agency appointed by the Govt. or Municipal Corporation and the result of their finding will be binding on the contractor.

Contractor shall not assign or sub-let the work without prior approval of Engineer-in-charge. Contractor would get load enhancement done from the electrical authority/concerned agency, NAFED would only pay the requisite fees needed by authority against indent supplied by the concerned agency.

The Contractor shall appoint an authorized agency of relevant manufacturer for carrying out the works for the Data and VOICE Networking and get a Certification of the executed work and installation and get it tested to the satisfaction of Architect/client .The authorization certificate from the relevant manufacturer whether the agency doing the work is their authorized agent/system integrator has to be submitted before starting of the work shall be produced . Without the performance certificate from the company, the executed work shall be deemed as incomplete and shall not be accepted by the client and all payments made in this head be recovered by 50% for that particular Head. **The performance certificate should be for 8/10 years from the relevant manufacturer as applicable, The Data Cabling Scope of Work will also to have provision for the GFC Drawings including route, Labeling and Penta Testing Report and as Built drawings.**

For Addressable Fire Alarm System, the Contractor shall appoint an authorized agency of the relevant principal manufacturer for carrying out the work and get a Certification of the executed work and installation and get it tested to the satisfaction of Engineer-in-Charge/client.

The civil contractor / Electrical Contractor combined shall appoint an Electrical Engineer / Diploma Holder / Foreman of sufficient experience not less than 3 years for the works to be executed at site as per the IE rules.

The contractor shall submit a sample board, incorporating in it all the samples of the Electrical Works, ie., Wires, Conduits etc. proposed to be used for approval of Engineer- in –charge before commencement of work. No extra payment shall be given for the same.

ADDITIONAL SPECIAL CONDITIONS OF CONTRACT:

1. The contractor shall take the responsibility of dismantling and disposal of existing civil, electrical and furniture work to the destination specified by the owner.



2. All electrical fixtures, equipment should be removed so as to be serviceable and handed over to the owners and these fittings and fixtures shall be the property of Oriental Insurance Limited.

The contractor shall take responsibility of getting approval of Building Authorities / Estate Officer and other Authority as required for executing the work during and off the office timings.

4. On partial completion of work the contractor shall be furnished with a certificate, but not such certificate be given nor shall the work be considered to complete until the contractor shall have removed from the area of the premises (to be distinctly marked by the Architect/ Chief Manager (Estate) in the site plan which, the work shall be executed) all scaffoldings, surplus materials and rubbish and clean the dirt from all wood work, doors, windows, walls, floors or other parts of any building, in or upon which the work is to executed, or of which he may have had in possession for the purpose of the execution hereof. If the contractor shall fail to comply with the requirements of the

clause as to the removal of scaffoldings, surplus materials and rubbish and cleaning off dirt on or before the date fixed for the completion of the work, the architect may at the expense of the contractor remove such scaffolding, surplus materials, and the contractor shall forthwith pay the amount of all expense so incurred, and shall have no claim in respect of any such scaffolding or surplus materials aforesaid, except for any actually realized by the sale thereof.

5. SELECTION OF MATERIALS

On unavailability of any material in the list of approved materials for interior works, for any reason whatsoever may be, the Architects in consultation with NAFED may permit the contractor to use the equivalent material.

In an event, the contractor fails to procure approval from statutory Authorities if needed by municipal authorities, as mentioned above / otherwise required, the work shall not be deemed to be completed and 50% of the EMD payment due to the contractor shall stand forfeited.

SPECIFICATIONS FOR INTERNAL ELECTRICAL INSTALLATION

SECTION 1. GENERAL AND TECHNICAL

1. POINT WIRING



A point (other than a socket outlet point) shall include all work necessary in complete wiring to the following outlets from the controlling switch or MCB. The scope of wiring for a point shall however, include the wiring work necessary in tapping from another point in the same distribution circuit.

- a) Ceiling rose or connector (in the case of points for ceiling / exhaust fan points, prewired light fittings, and call bells).
- b) Ceiling rose (in the case of pendants except stiff pendants).
- c) Back plate (in the case of stiff pendants).
- d) Lamp holder (in the case of goose neck type wall brackets, batten holders and fitting which are not prewired).

Note:- In the case of call bell points the words "from the controlling switch board or MCB" shall be read as "from the ceiling rose meant for connection to bell push".

Scope

- a) Any special block required for neatly housing the connector in batten wiring system.
- b) Control switch or MCB, as specified.
- c) 3 pin or 6 pin socket, ceiling rose or connector as required. (2 pin and 5 pin socket outlet shall not be permitted)
- d) Connection to ceiling rose, connector, socket outlet, lamp holder, switch etc.

Point wiring for socket outlet points

- a) The light plug (5A / 6A) point and power (15A / 16A) point wiring shall be measured on linear basis, from the respective tapping points namely, switch box, another socket outlet point, or the sub distribution board as the case may be upto the socket outlet.
- b) The metal / PVC box with cover, switch / MCB, socket outlet and other accessories shall be measured and paid as separate item.
- c) Note:- There shall normally be no "on the board" light plug point.
- d) The power point outlet may 15A/ 5A or 16A/ 6A six pin socket outlet, where so specified in the tender documents.

Twin control light points wiring

- a] A light point controlled by two numbers of two way switches shall be measured as two points from the fitting to the switches on either side.
- b] No recovery shall be made for non-provision of more than one ceiling rose or connector in such cases.

Multiple controlled call bell points wiring

- a] In the case of call bell points with a single call bell outlet, controlled from one more than one place, the points shall be measured in part i.e.(a) from one call bell outlet to one of the nearest ceiling rose meant for connection to bell push, treated as one point and classified from that ceiling rose to the next one and so on , shall be treated as separately point(s).
- b] No recovery shall be made for non- provision of more than one ceiling rose or connector for connection to call bell in such cases.



2. CIRCUIT AND SUBMAIN WIRING

Circuit Wiring

Circuit wiring shall mean the wiring from the distribution board upto the tapping point for the nearest first point of that distribution circuit, viz. upto the nearest first switch box.

Submain wiring

Submain wiring shall mean the wiring from one main / distribution switchboard to another.

Measurement of circuit and submain wiring

- a] circuit and submain wiring shall be measured on linear basis along the run of the wiring. The measurement shall include all lengths from end conduit as the case may, exclusive on interconnections inside the switch board etc. The increase on account of diversion or slackness shall not be included in the measurement.
- b] The length of circuit wiring with two wires shall be measured from the distribution board to the first nearest switch box in the circuit irrespective of whether the neutral conductor is taken to switchbox or not.
- c] When circuit wires and wires of point wiring are run in same conduit/ circuit wiring shall be measured on linear basis depending on the actual number and sizes of wires run in the existing conduit.
- d] Protective (loop earthing) conductors which are run along the circuit wiring and the submain wiring shall be measured on linear basis and paid for separately.

3. SYSTEM OF DISTRIBUTION AND WIRING

Distribution

- a] Main distribution board shall be controlled by a circuit breaker or linked switch with fuse. Each outgoing circuit shall be controlled by a switch with fuse, circuit breaker or only a fuse on the phase or live conductor.
- b] The branch distribution board shall be controlled by a linked switch fuse or circuit breaker. Each outgoing circuit shall be provided with a fuse or miniature circuit breaker (MCB) of specified rating on the phase or live conductor.
- c] Triple pole distribution boards shall not be used for final circuit distribution, unless specific approval of the Engineer-in-charge is obtained. In such special cases, the triple pole distribution boards shall be of HRC fuse type or MCB type only.
- d] The loads of the circuits shall be divided, as far as possible , evenly between the number of ways of the distribution boards, leaving at least one spare circuit for future extension.
- e] 'Power' wiring shall be kept separate and distinct from 'Lighting' wiring, from the level of circuits i.e. beyond the branch distribution boards.

Wiring system



a] Unless and otherwise specified in the tender documents, wiring shall be done only by the "Looping system". Phase or live conductors shall be looped at the switch boxes and neutral conductors at the point outlets.

b] Lights, fans and call bells shall be wired in the 'lighting' circuits. 15A/ 16A socket outlets and other power outlets shall be wired in the 'Power' circuits. 5A/ 6A socket outlets shall be wired in the 'lighting' circuits in non residential buildings and in the 'power' circuit in residential buildings.

Passing through walls or floors

a] Where a wall pipe passes outside a building so as to be exposed to weather, the outer end shall be mounted and turned downwards and properly bused on the open end.

Joints in wiring

a] There shall be no joints in the through-runs of cables. If the length of final circuit or sub-main is more than the length of a standard coil, thus necessitating a through joint, such joints shall be made by means of approved mechanical connectors in suitable junction boxes.

b] Termination of multi-stranded conductors shall be done using suitable crimping type thimbles.

4. RATING OF OUTLETS (TO BE ADOPTED FOR DESIGN)

a] Ceiling fans shall be rated at 60 W. Exhaust fan, fluorescent tubes, compact fluorescent tubes, HPMV lamps, HPSV lamps etc. shall be rated according to their capacity. Control gear losses shall be also considered as applicable.

b] 5A / 6A and 15A / 16A socket outlet points shall be related at 100W and 1000W respectively, unless the actual values of loads are specified.

5. CAPACITY OF CIRCUITS :

a] "Lighting" circuit shall not have more than a total of 10 points of light, fan and socket outlets, or a total connected load of 800W, whichever is less.

b] "Power" circuit shall be designed with only one outlet per circuit in nonresidential buildings. The circuit shall be designed based on the load. Where not specified, the load shall be taken as 1 KW per outlet.

c] "Power" circuit in residential buildings shall be designed for not more than two outlets (15A/ 16A and / or 5A/ 6A) per circuit. The ratings for load calculation purposed shall however be taken as per the type of outlets.

d] Load more than 1 KW shall be controlled by an isolator or miniature circuit breaker.

6. WIRING ACCESSORIES

Control switches for points

a] All the Switches, Sockets, TV socket and Computer Socket shall be modular type.

b] Power (15A/ 16A) outlets shall be controlled by single pole modular type switches or by MCB's, where specified. Only MCB's shall be used for controlling industrial type socket outlets, and power outlets above 1 KW.



Socket outlets

- a] Socket outlets shall be of the same type, namely modular type, as their control switches. These shall be rated either for 5A/ 6A, or 15A/16A. Combined 5A/ 15A, or 6A/ 16A six pin socket outlet may be provided in 'power circuits only where specified.
- b] Outlet boxes for socket outlets (both 15A/ 16A and 5A/ 6A) points in residential buildings.

7. FITTINGS

Indoor type fittings

- a] Fittings using discharge lamps shall be complete with power factor correction capacitors, either integrally or externally. An earth terminal with suitable marking shall be provided for each fitting for discharge lamps.
- b] Fittings shall be installed such that the lamp is at a height of 2.5m above floor level, unless otherwise directed by the Engineer-in-charge.

Bulk head fittings

Bulk head fittings shall be of cast iron / cast aluminium body, suitably painted white inside and gray outside, complete with heat resistant glass cover, gasket, BC lamp holder for 100W incandescent lamp.

8. MCB TYPE DISTRIBUTION BOARD (MCBDB)

- a] MCBDB's may be of single phase, 3 phase (horizontal type) suitable for feeding single phase loads, or 3 phase (vertical type) suitable for feeding single phase as well as 3 phase loads, as specified. These shall be complete with accessories, but without MCB's which shall be specified as a separate item in the tender documents.
- b] The current ratings and the number of ways shall be as specified. Blanking plates shall be provided to close unused ways. These shall be indicated as separate item in the Schedule of work.

9. PRE-WIRED MCB DISTRIBUTION BOARDS

- a] The board shall also be provided with a loose wire box as a compartment for the complete width and , depth of the board, and of minimum height of 125mm in case of TPN DB's, and 100mm in case of SPN DB's.
- b] The board shall be provided with a hinged cover of 1.6mm thick sheet steel in the front. Only the knobs of the MCB's shall protrude out of the front covers through openings neatly machine made for the purpose.
- c] The board shall be complete with the following accessories:-
 - i) 200 A copper busbar (s).
 - ii) Neutral link.
 - iii) Common earth bar.
 - iv) DIN bar for mounting MCB's.
 - v) Elemex type terminal connectors suitable for incoming and outgoing cables.
 - vi) A set of indication lamps with HRC cartridge fuses for each phase of the incoming supply.



vii) Earthing stud.(s)

Note:- MCB's and blanking plates shall be specified as separate items, as required.

10. SWITCH BOARD LOCATIONS

10.1 Cubicle type switchboards

Cubicle type switchboards shall be conform to section 4 of "General Specifications for Electrical Works (Part - IV - Substation), 1982".

11. SWITCH BOARD INSTALLATION

a] Unless and otherwise specified in the tender documents, a switchboard shall not be installed so that its bottom is within 1.25 m above the floor.

b] There shall be a clear distance of 1 m in front of the switch boards. The space behind the switchboards shall be either less than 20 cm or more than 75 cm. If there are any attachments or bare connections at the back of the switch board. Rule 51 (c) of the Indian Electricity Rules shall apply.

c] Where it is required to terminate a number of conduits on a board. it may be convenient to provide a suitable MS adopter box for the purpose. Such boxes shall be provided with the prior approval of the Engineer-in-charge and this will be paid for separately.

d] No apparatus shall project beyond any edge of the panel. No fuse body shall be mounted within 2.5cm of any edge of the panel.

e] Busbars and interconnecting strips in fabricated boards shall be PVC tapped or sleeved in Red, Yellow and Blue for phases, and Black for neutral. The interconnecting cables shall also follow this colour coding.

12. ATTACHMENT OF FITTINGS AND ACCESSORIES

12.1 Conduit wiring system

a] All accessories like switches, socket outlets, call bell pushes and regulators shall be fixed in flush pattern inside the switch/ regulator boxes.

b] Aluminum alloy or cadmium plated iron screws shall be used to fix the accessories to their bases.

c] The switch box/ regulator box shall normally be mounted with their bottom 1.25cm from floor level, unless otherwise directed by the Engineer-in-charge.

13 FIXING TO WALLS AND CEILING

a] Wooden plugs for ordinary walls or ceiling shall not be used in view of the ban on use of timber in Govt. works. However, where so specified, these shall be of well seasoned teak or other approved hard wood not less than 5 cm long by 2.5cm square on the inner end, and 2cm square on the outer end. They shall be cemented into walls within 6.5mm of the surface, the remainder being finished according to the nature of the surface with plaster or lime punning.

b] PVC sleeves/ dash fasteners should normally be used for fixing to walls or ceiling.

M.S. CONDUIT WIRING SYSTEM



APPLICATION

- a] Recessed conduit is suitable generally for all applications. Surface conduit work may be adopted in places like wiring above false ceiling / below false flooring, and at locations where recessed work may not be possible to be done. The type of work, viz. surface or recessed, shall be as specified in the respective works.
- b] Flexible conduits may only be permitted for interconnections between switchgear, DB's and conduit terminations in wall.

MATERIALS

Conduits

s

- a] All rigid conduit pipes shall be of MS and ISI marked. The wall thickness shall not be less than 1.6mm (16 SWG) for conduits up-to 32mm dia. and not less than 2mm (14 SWG) for conduits above 32mm dia.
- b] No MS conduit less than 20mm in diameter shall be used.

Conduit accessories

- a] All conduit accessories shall be of solid type.
- b] Saddles for surface conduit work on wall shall not be less than 0.55mm (24 gauge) for conduits upto 25mm dia. and not less than 0.9mm (20 gauge) for larger diameter. The corresponding widths shall be 19mm & 25mm.

Outlets

- a] The switch box or regulator box shall be made of metal on all sides, except on the front. In the case of cast boxes, the wall thickness shall be at least 3mm and in case of welded mild steel sheet boxes, the wall thickness shall not be less than 1.2mm (18 gauge) for boxes upto a size of 20cm x 30cm, and above this size 1.6mm (16 gauge) thick MS boxes shall be used. The metallic boxes shall be duly painted with anticorrosive paint before erection as per chapter 10 of these specifications.
- b] Outlet boxes shall be of one of the size, covered in the Schedule of Rates (Elect.), Part I- Internal.
- c] Where a large number of control switches and/ or fan regulators are required to be installed at one place, these shall be installed in more than one outlet box adjacent to each other for ease of maintenance.
- d] An earth terminal with stud and 2 metal washers shall be provided in each MS box for termination of protective conductors and for connection to socket outlet/ metallic body of fan regulator etc.
- e] Clear depth of the box shall not be less than 50mm, and this shall be increased suitably to accordance mounting of fan regulators in flush pattern.

INSTALLATION

Common aspects for recessed and surface conduit works.

- a] **Bends in conduit**



- i) All necessary bends in the system, including diversion, shall be done either by neatly bending the pipes without cracking with a bending radius, or alternatively, by inserting suitable solid type normal bends or similar fittings, whichever is most suitable.
- ii) No length of conduit shall have more than the equivalent of four quarter bends from outlet to outlet.

Additional requirements for surface conduit work.

a] Fixing conduit on surface

Conduit pipes shall be fixed by saddles, secured to suitable approved plugs with screws in an approved manner at an interval of not more than one metre, but on either side of the couplers or bends or similar fittings, saddles shall be fixed at a distance of 30 cm from the centre of such fittings.

b] Fixing outlet boxes

Only a portion of the switch box shall be sunk in the wall, the other portion being projected out for suitable entry of conduit pipes into the box.

Additional requirements for recessed conduit work

a] Fixing conduits in chase

- i) The conduit pipe shall be fixed by means of J-hooks, or by means of saddles, not more than 60 cm apart, or by any other approved means of fixing.
- ii) All joints of conduit pipes shall be treated with some approved preservative compound to secure protection against rust.

b] Fixing conduits in RCC work

The conduit pipes shall be laid in position and fixed to the steel reinforcement bars by steel binding wires before the concreting is done. The conduit pipes shall be fixed firmly to the steel reinforcement bars to avoid their dislocation during pouring of cement concrete and subsequent tamping of the same.

- ii) Fixing of standard bends or elbows shall be avoided as far as practicable, and all curves shall be maintained by bending the conduit pipe itself with a long radius which will permit easy drawing in of conductors.

c] Fixing inspection boxes

Suitable inspection boxes to the minimum requirement shall be provided to permit inspection, and to facilitate replacement of wires, if necessary.

These shall be mounted flush with the wall or ceiling concrete. Minimum 65mm depth junction boxes shall be used on roof slabs and the depth of the boxes in other places shall be as per IS: 2667 - 1977.

d] Fixing switch boxes and accessories

Switch boxes shall be mounted flush with the wall. All outlets such as switches, socket outlets etc. shall be flush mounting type, unless otherwise specified in the Additional Specifications.



e] Fish wire

i) To facilitate subsequent drawing of wires in the conduit, GI fish wire of 1.6mm / 1.2mm (16/ 18 SWG) shall be provided along with the laying of the recessed conduit.

MEDIUM VOLTAGE DISTRIBUTION BOARDS FOR POWER AND LIGHTING DISTRIBUTION

General

Distribution board shall be suitable for 415 Volt, 3 phase AC supply or 230 volt single phase AC supply as required. Distribution boards shall generally conform to IS 2675 or BS 214. However, the specifications hereinafter described shall take precedence over the above wherever this specification call for a higher standard or material or workmanship.

Type and construction

Distribution boards shall be of totally enclosed dead front safety type. The enclosure be made of best quality sheet steel of not less than 14 gauge. The sheet steel shall be treated with a rigorous rust inhibited process before fabrication. The distribution boards shall comprise of MCB isolator or moulded case circuit breaker as incoming and required number of miniature circuit breaker as outgoing. The main and outgoing shall have rating as specified on the drawings and schedule.

Busbar

Suitable bus bars made of high conductivity copper strips and mounted on non-hygroscopic insulating supports shall be provided.

Circuit Breaker

Moulded case circuit breaker and miniature circuit breakers shall be of approved design and make. Circuit breakers shall be equipped with individually insulated, traced and protected connectors. The front face of all the breakers shall be flush with each other. Each breaker shall be provided with card holder and neatly printed card identifying the circuit. The position of handle of the breaker shall clearly indicate the condition of breakers such as "**ON/OFF/TRIPPED**".

Safety & Interlocks

All the live parts shall be shrouded such that accident contacts with live parts are totally avoided. Distribution board shall be provided with a front hinged door. Distribution board shall be provided with a front hinged door. Distribution board interior assembly shall be dead front with the front cover removed. Main lugs shall be shrouded on five sides. Suitable insulating barrier made of arc resistant material shall be provided for phase separation. Ends of the bus structures shall also be shrouded.

Cabinet Design

The distribution board cabinet shall be totally enclosed type with dust and vermin proof construction. The cabinet shall be stove enamelled to grey shade finish. The interior surface shall be finished to an off-white shade. The interior components shall be mounted on a separate sheet steel which is mounted and locked on to the studs provided inside the cabinet. Over this, a cover made of hylam sheet or stove enamelled sheet steel shall be provided with slots for operating handles of breakers. The cabinet shall be provided with a front door having a spring latch and vault lock. Cabinets shall have detachable gland plates at both top and bottom.



Terminals

Distribution boards shall be provided with a terminal block of adequate size to receive mains and outgoing circuits. The location of the terminal block shall be so located that crowding of wires in the proximity of live parts is avoided. A neutral link having rating equal to that of phase bus shall be provided.

Directory

Distribution boards shall be provided with a directory indicating the area or loads served by each circuit breaker, the rating of breakers, size of conductors etc. The directory shall be mounted in metal holder with a clear plastic sheet on inside surface of the front door.

Installation

Distribution boards shall be surface mounted or recessed mounted as required by the Architects and at the locations shown on the drawings. The boards shall be fixed with suitable angle iron clamps and bolts. All the cables / conduits shall be properly terminated using glands / grips / check nuts etc. Wiring shall be terminated properly using crimping lugs / sockets and PVC identification ferrules. No bare conductor shall be allowed inside the boards. Distribution boards shall be bonded to the earth at least at two points using brass bolts and lugs. Suitable name plate, danger plate, indicating the voltage shall be fixed to the front cover.

Testing

Distribution board shall be tested at factory as per IS 2675 or BS 214. The tests shall include insulation test, high voltage test etc.

Distribution boards shall be tested for insulation resistance after the erection.

CUBICLE TYPE BOARDS

Cubicle type switch board shall be fabricated out of sheet steel not less than 2.0 mm thick. Wherever necessary, such sheet steel members shall be stiffened by angle iron frame work. General construction shall employ the principle of compartmentalization and segregation for each circuit. Unless otherwise approved, incomer and bus section panels or sections shall be separate and independent and shall not be mixed with sections required for feeders. Each section of the rear accessible type board shall have hinged access doors at the rear. Overall height of the board shall not exceed 2.0 meters. Operating levers, handle etc, of highest unit shall not be at a height more than 1.7 m. Multi-tier mounting of feeders is permissible. The general arrangement for multi-tier construction shall be such that the horizontal tiers formed present a pleasing and aesthetic look. The general arrangement shall be got approved before fabrication. Cable entries for various feeders shall be either from the rear or from the front through cable alleys located in between two circuit sections. All cable entries shall be through gland plates. There shall be separate gland start plate for each cable entry so that there will not be dislocation of already wired circuit when new feeders are added. Cable entry plates shall therefore be sectionalized. The construction shall include necessary cable supports for clamping the cable in the cable alley or rear cable chamber.

SWITCH BOARD INSTALLATION

- a] Switchboard shall not be installed so that its bottom is within 1.25 m above the floor.
- b] There shall be a clear distance of 1 m in front of the switch boards. The space behind the switchboards shall be either less than 20 cm or more than 75 cm. If there are any attachments or bare connections at the back of the switchboard. Rule 51 (c) of the Indian Electricity Rules shall apply.
- c] Where it is required to terminate a number of conduits on a board. it may be convenient to provide a suitable MS adopter box for the purpose. Such boxes shall be provided with the prior approval of the Engineer-in-charge and this will be paid for separately.



d] No apparatus shall project beyond any edge of the panel. No fuse body shall be mounted within 2.5cm of any edge of the panel.

e] Busbars and interconnecting strips in fabricated boards shall be PVC tapped or sleeved in Red, Yellow and Blue for phases, and Black for neutral. The interconnecting cables shall also follow this color coding.

TESTING OF INSTALLATION

GENERAL

Tests

On completion of installation, the following tests shall be carried out:-

- a] Insulation resistance test.
- b] Polarity test of switch.

Witnessing of Tests

Testing shall be carried out for the completed installations, in presence of and to the satisfaction of the Engineer-in-Charge by the contractor. All test result shall be recorded and submitted to the Department.

INSULATION RESISTANCE

The insulation resistance in mega ohms measured as above shall not be less than 12.5 mega ohms for the wiring PVC insulated cables, subject to a minimum of 1 mega ohm.

A preliminary and similar test may be made before the lamps etc. are installed, and in this event the insulation resistance to earth should not be less than 25 mega ohms for the wiring with PVC insulated cables, subject to a minimum of 2 mega ohms.

The term "outlet" includes every point along with every switch, except that a switch combined with a socket outlet, appliance or lighting fitting is regarded as one outlet.

POLARITY TEST OF SWITCH

The installation shall be connected to the supply for testing. The terminals of all switches shall be tested by a test lamp, one lead of which is connected to the earth. Glowing of test lamp to its full brilliance, when the switch is in "on" position irrespective of appliance in position or not, shall indicate that the switch is connected to the right polarity.



DETAILS of BIDDER

1.	Name of the Firm / Company :	
2.	Registered Address: Address for Communication:	
3.	Contact Information: Office Phone Number: Mobile Number: E-Mail: Fax:	
4.	Status of the Firm: (Please tick appropriate box & attach proof)	<input type="checkbox"/> Company <input type="checkbox"/> Partnership <input type="checkbox"/> Proprietary Firm <input type="checkbox"/> Individual
5.	Year of Establishment:	
6.	Registration Details of Company/Firm Registration Number & Date: Income Tax PAN No.: Goods & Service Tax No.: (attach proof)	
7.	Audited balance sheet and profit & loss account / IT Returns for last three financial years	
8.	Details of works done in last 5 years. Please mention only those works which qualifies.	1. 2. 3.
9.	Specify the maximum value of work done in a year:	Rs..... Year



10.	Name & Address of Bankers (Enclose Solvency Certificate in Original)	<input type="checkbox"/>	YES	
		<input type="checkbox"/>	NO	
11.	Details of three responsible clients/ persons to whom the major works carried out by the applicant with address and telephone number who will be in a position to certify about the quality as well as pastperformance of your organization	1. 2. 3.		
12.	Details of Tender Fee	DD No.	Date	Issuing Bank/ Branch
	Details of EMD			

DECLARATION

- All the information furnished by me / us here above is correct to the best of my knowledge and belief.
- I / we have no objection if enquiries are made about the work listed by me / us in the accompanying sheets / Annexures.
- I / We agree that the decision of NAFED in selection of contractor will be final and binding to me / us.
- I / We have read the instructions and I / we understand that if any false information is detected at a later date the tender shall be cancelled at the discretion of the Company and liable for any action, as deem fit by the NAFED.

Place: SIGNATURE

Date: NAME & DESIGNATION

SEAL OF ORGANISATION

Note:

Where copies are to be furnished, they have to be certified copies by the concerned agencies.



Agreement Form

THIS AGREEMENT made on this _____ day of _____ between The Oriental Insurance Company Limited (hereinafter “the Purchaser”) of one part and “<Name of Seller>” (hereinafter “Contractor”) of the other part:

WHEREAS the Purchaser is availing the service for the <Name of the work> and has accepted a bid of the Contractor for Rs. _____ (Contract Price in Words and Figures) (hereinafter “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

In this Agreement words and expressions shall have the same meaning as are respectively assigned to them in the Conditions of Contract referred to.

The following documents shall be deemed to form and be read and construed as part of this Agreement viz,

- ❖ The Conditions of Contract
- ❖ The WorkAward Letter
- ❖ Tender No. Datedduly Signed by the Seller/Bidder
- ❖ General Terms and conditions
- ❖ Scope of work
- ❖ Integrity Pact
- ❖ Financial Bid/BOQ

Whereas the vendor has deposited DD of Rs/- (Rupees) with the NAFED as Earnest Money Deposit for the performance of the agreement.

NOW IT IS HEREBY AGREED AS FOLLOWS:-

1. In consideration of the payment to be made to the vendor as herein provide he shall upon & subject to the said conditions execute and complete the work shown upon the said conditions and schedule of quantities.
2. NAFED shall pay the vendor such sums as shall become payable hereunder at the kinds and in manner specified in conditions.
3. The said conditions shall be read and form part of the agreement and parties will hereto respectively abide by/submit themselves to the conditions and stipulation and perform the agreement on their part respectively as contained in such conditions.
4. It is also agreed that NAFED may in the event of termination of contract as provided herein, having regard to exigencies of matter, arrange maintenance/repair/replacement of parts etc. in discretion from any other source/agency from the date of notice. In the event of termination of contract for non-satisfactory performance of the contract, the security deposit made by contractor shall stand forfeited. NAFED is not liable to pay any interest on the security deposit made by the contractor.



5. All the disputes arising out of or in any ways connected with this agreement shall be deemed to have arisen in Jaipur & only in the Courts in Jaipur shall have jurisdiction to determine the same.
6. On any stage during the contract period, if the documents submitted by the us are found to be fake then the EMD, Security Deposit, Retention amount and any other due amount, if any, will be forfeited, legal action will be taken against us and we will be blacklisted in the Oriental Insurance Co. Ltd.
7. The contract has been carefully read by us and fully understood by us.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day, month and the year first above written.

Signed, Sealed and Delivered for "The Oriental Insurance Co. Ltd." by it's constituted Attorney

Signed, Sealed and Delivered for _____ by it's constituted Attorney

Signature
Name
Designation
Address
Company
Date
Company
Seal

Signature
Name
Designation
Address
Company
Date
Company
Seal

Witness I

Witness II

Signature
Name
Designation
Address
Company
Date

Signature
Name
Designation
Address
Company
Date



Section – VI: List of Approved Make/Materials

SPECIFICATIONS/BRAND NAMES of materials and finished approved by the Architect/Employer are listed below. However equivalent materials and finished of any other specialized firms may be used , In case it is established that the brands specified below are not available in the market are subject to the approval of the alternative brand by the Architect/Consultant.

LIST OF APPROVED MATERIALS FOR INTERIOR WORKS (SAMPLES TO BE CHECKED & TESTED AT CONTRACTOR'S COST)	
Make indicated in the under mentioned list of Approved Makes is for general guidance of contractor. Final choice of make & model out of List of Approved Makes shall be of Architect/ Employer.	
Material	Approved Make/Brand
Laminated sheet (1.0 mm thick) Premium	Formica / Greenlam / Merino / Durian
Comm. Board / Flush door shutter	Duro / Century / Green / Durian / Korra Ply
Commercial Ply wood	Duro / Century / Green / Durian / Korra Ply
MR grade ply Conforming to IS 303	Duro / Century / Green / Korra Ply
Marine grade Ply wood Conforming IS 710	Greenply / Duro / Century/ Durian / Korra Ply
BWP grade Block Board /ply	Duro / Merino / Century / Korra Ply
Melamine /PU Finish	MRF/Asian Paints /Nerolac
Ceramic Tiles/vitrified homogeneous glazed tiles.	Kajaria / Nitco / Somany / Marbonite.
Glazing (Clear)	St. Gobain / Indo Asahi / Modi float
Glue	Fevicol
Paints/Distemper/Arcylic/Enamel/Plastic	Asian / Shalimar / ICI / Nerolac / Berger
M.S pipes, plates, flats, angle	Sail / Sail / HSL
Door locks	Godrej / Dorset / Hettich
Door closer	Dorma / Dorset / Ozone
Anti termite/fire retardant paint	Viper Firestar Fr – 881 paint
Corian	DU Pont / Samsung / LG / Granum
POP	JK / Birla
False ceiling (gypsum & grid ceiling)	Lafarge (Boral)Gypsum/ Saint-Gobain/ India Gypsum/USG)/Armstrong
Hardware/Accessories	Hettich / Haffele
Compactors	Godrej / INDO / Wipro / Durian
Loose furniture	Godrej / Herman Miller / Durian
Roller Blinds	Hunter Douglas/ Roselle/Winfab / Vista
Frosted film	3M
Flooring Adhesive	LATICRETE / BAL ENDURA

LIST OF APPROVED MAKES FOR ELECTRICAL WORK: (SAMPLES TO BE CHECKED & TESTED AT CONTRACTOR'S COST)		
Make indicated in the under mentioned list of Approved Makes is for general guidance of contractor. Final choice of make & model out of List of Approved Makes shall be of Architect/ Employer.		
1.	XLPE 11 KV Cable.	Skytone / KEI / Havells / Polycab / Finolex
2.	11 KV Termination Kits.	Raychem / XICON / Denson / J-Sea
3.	L.T. Cable, 1.1KV grade.	KEI / Finolex / Polycab / LAPP
4.	Distribution Boards with Miniature Circuit Breakers, ELCB	Legrand / Schneider / Hagger
5.	Cable Lug (Tinned Copper)	Schenider / Dowells / Jainson.
6.	Cable Gland	Peeco / Commet / Gripwell
7.	Cable Tray/ Raceway	CTM Engineers / KME / MEM
8.	Telephone Cable	Delton / KEI / Polycab
9.	Co-axial cable for TV	KEI / D Link / Polycab
10.	Splitters, Tap Off & Amplifier etc.	Unidac / Shyam
11.	Telephone Tag Block	Krone / TVS R&M
12.	M.S. Conduit	BEC / RMCON / AKG
13.	PVC Conduit	BEC / AKG / Polycab
14.	Fire Alarm System, MCP, FACP, Hooter, Detector etc	Esser Honeywell / Tyco Simplex / Notifier / Siemens Fire Finder
15.	Modular Switches & Sockets	Crabtree Athena / MK Wraparound Plus / Schenider Opale
16.	LV System Wire (Cat 6) / Patchcords	Amp / Systemax
17.	Telephone/ Data Outlet	Amp / Systemax
18.	Lightning Protection	ABB / LPI
19.	Earthing	ABB / Obo Betterman
20.	Air Circuit Breaker	Schenider / L & T / Mitsubishi
21.	DC Miniature Circuit Breaker & Distribution Board	Schenider / L & T / ABB
22.	Moulded Case Circuit Breaker with rotary operating handle.	Schenider / L & T / Mitsubishi
23.	Contactors, Timers	Schenider / L & T / Mitsubishi
24.	Capacitors	L & T / Schenider / Neptune
25.	Voltmeter & Ammeter	Schenider / Enersol / Neptune
26.	Selector Switch	Kaycee / L & T
27.	Current Transformer	Kappa / Matrix / AE
28.	Indicating Lamp	L & T / Siemens
29.	PLC	Siemens / Allen Bradley
30.	Protective Relays	Schenider / Siemens / L & T
31.	APFC Relay (Microprocessor based)	Schenider / L & T / Neptune
32.	Batteries	Exide / Prestolite / Ameron
33.	Battery Charger	Mahamaya / Volstat Electronics / AE.
34.	Energy Analyzer Meter	Conzerve / Enersol / Neptune
35.	Dual Source Energy Meter (For Panel)	Conzerve / Enersol / Neptune
36.	Bus bar	Hindalco
37.	Synchronizing Relay	Woodward / Dief
38.	11 KV RMU	Schenider / ABB / Siemens
39.	Package Substation	Ambit Switchgear / Jackson / Universal

**National Agricultural Cooperative Marketing Federation of India Ltd.
(NAFED) Interior-Furnishing, Electrical & HVAC works
of NAFED office at Chennai.**



40.	Main L.T. Panel, Capacitor Panel & Distribution Panel.	Tricolite / Advance Panel / - Ambit Switchgear / Sudhir Genset / SPCElectrotech / MadhuElectricals
41.	Exhaust Fan / Wall mounted fan	GEC/Crompton/Orient
42.	Bakelite sheet 2.8 mm thick (I.S.I.)	Super Hylem / Formica



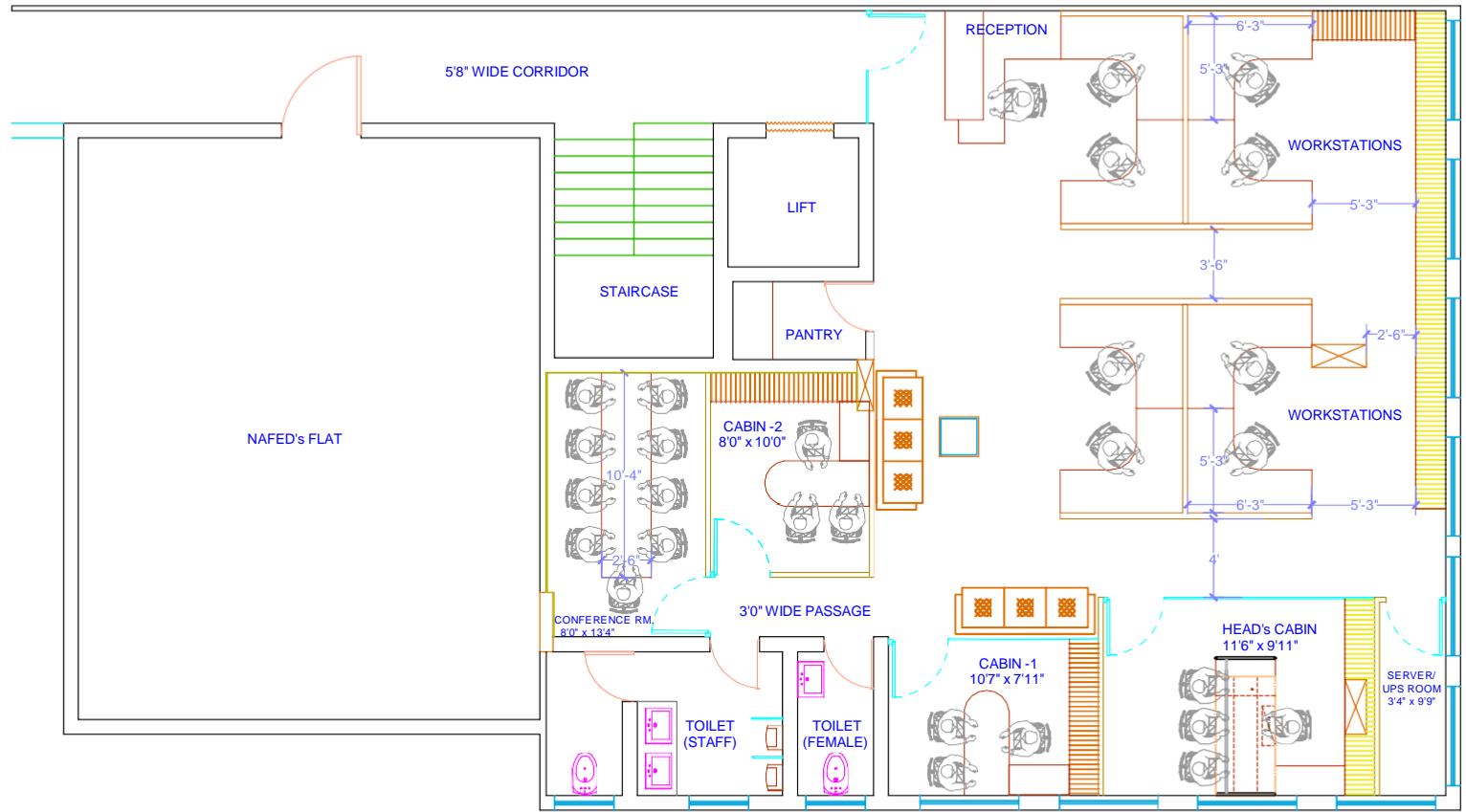
**SCHEDULE OF APPROVED MAKES FOR AC WORKS:
(SAMPLES TO BE CHECKED & TESTED AT CONTRACTOR'S COST)**

Make indicated in the under mentioned list of Approved Makes is for general guidance of contractor. Final choice of make & model out of List of Approved Makes shall be of Architect/ Employer.

1.	HI-WALL & CASSETTE SPLITS	mitsubishi/toshiba/o general
2.	VOLTAGE STABILIZERS	LOGICSTAT / MICEL
3.	Copper Pipes	MET / DIAMOND/ OHTC (Imported)
4.	PVC PIPE (20 Kg density)	POLY PACK / SETIA
5.	CROSSED LINKED POLYETHYLENE TUBE laminated with UV barrier film	SUPREME / PARAMOUNT
6.	GI SHEETS	SAIL / TATA
7.	Pre-laminated Fibre glass rolls	UP Twiga / Kimco / Owens corning
8.	Powder Coated Grills/Diffuser	Caryaire/Balance/Dynamic
9.	Duct/Grill/Diffuser Dampers	Caryaire / Balance/Dynamic
10.	Fire Damper	Caryaire / Balance/Dynamic
11.	Power Cables	Phenolex/Kalinga
12.	Control Cable	Phenolex/Kalinga
13.	CONDUIT for Elect. Wires	AKG / Marshal / Plaza
14.	Voltmeter / Ammeter	A. E. / IMP
15.	Contractors	LT / LK / Siemens / BCH. / G.E.
16.	Overload Relays	LT / LK / Siemens / BCH./GE
17.	Time Delay Device	Siemens / LT / LK / Concord
18.	Single phase Preventer	LT/LK/Minilec/GE
19.	Paints	ICI / Asian / Johnson & Nicholson
20.	M.C.B.	MDS/L&T / Indo Kopp/Standard

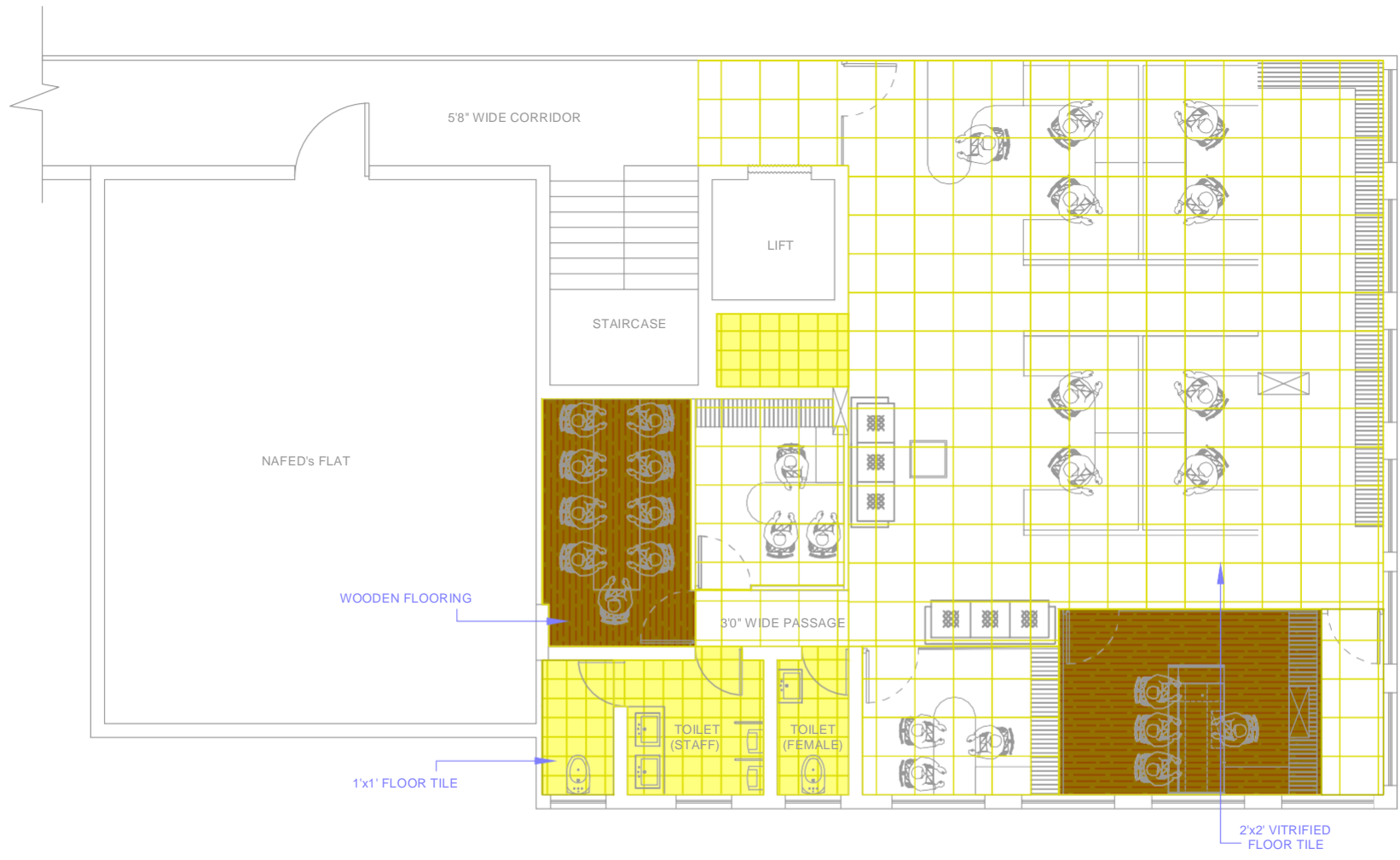


DRAWINGS



FINAL LAYOUT

REVISIONS	▼	DRAWN BY - ANKIT BHATIA	TITLE INTERIOR-FURNISHING WORKS LAYOUT OF NAFED OFFICE AT CHENNAI.	CLIENT NAFED CHENNAI	DEZIGN INTERIO-ARCH SOLUTIONS
31-12-2021		DATE - 28-12-2021			
.....		SCALE - NTS			
		DRG.NO. - NAFED/2021/01			
		JOB. NO. -			
			4/110, BASEMENT FLOOR FRONT SIDE, RAMMESH NAGAR, NEW DELHI-110015. MOB: 8527253808		



FLOORING LAYOUT

REVISIONS	▼	DRAWN BY - ANKIT BHATIA	TITLE INTERIOR-FURNISHING WORKS LAYOUT OF NAFED OFFICE AT CHENNAI.	CLIENT NAFED CHENNAI	DEZIGN INTERIO-ARCH SOLUTIONS
31-12-2021		DATE - 28-12-2021			
.....		SCALE - NTS			
		DRG.NO. - NAFED/2021/01			
		JOB. NO. -			
					4/110, BASEMENT FLOOR FRONT SIDE, RAMESH NAGAR, NEW DELHI-110015. MOB: 8527253808

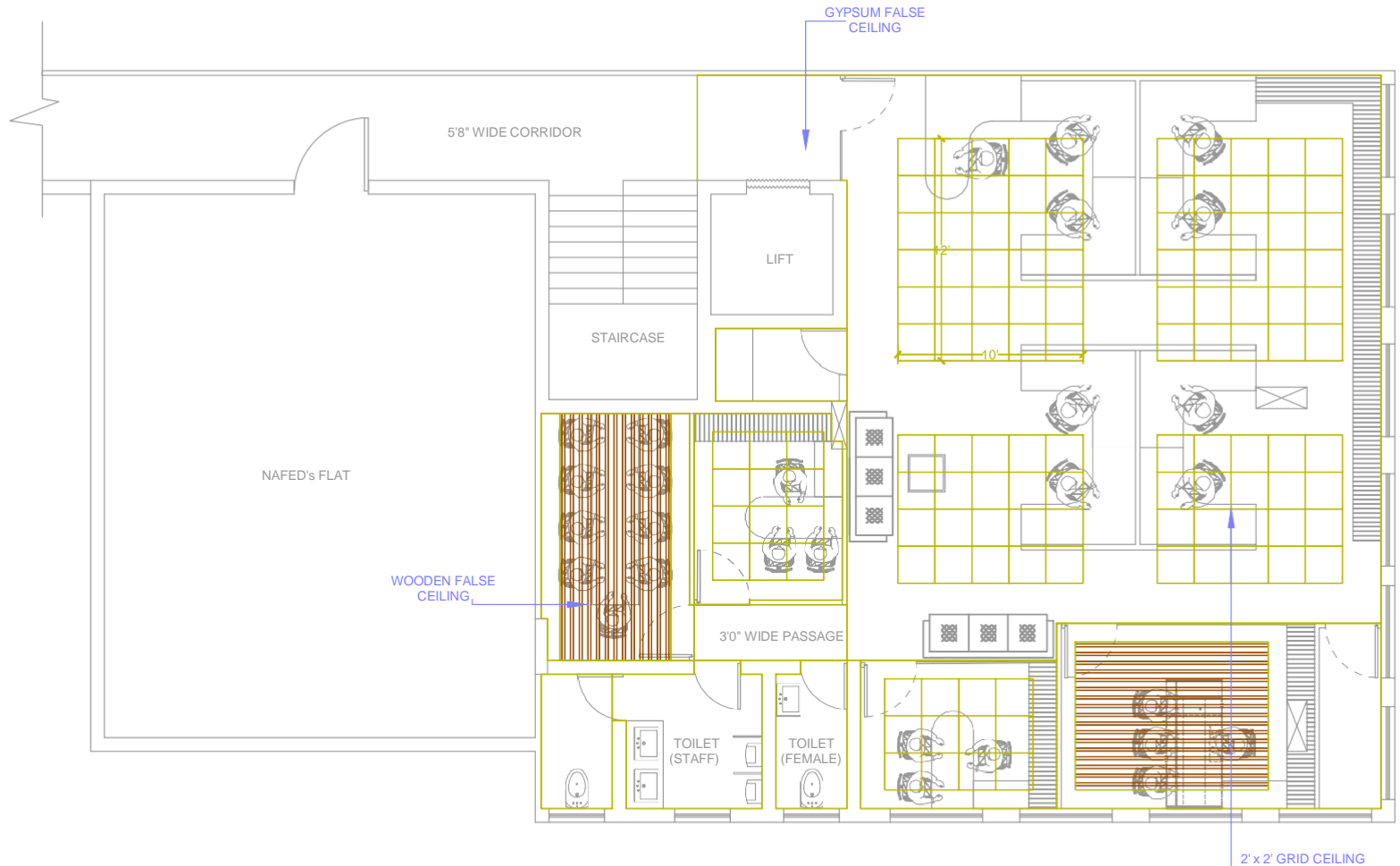


LEGEND : (Electrical Lights)

S. No.	SYMBOL	DESCRIPTION
1.		12 TO 15 WATTS DOWNLIGHTERS (CEILING MOUNTED)
2.		2X2 LIGHT FIXTURES (CEILING MOUNTED)
3.		LED STRIP LIGHT (FOR COVE IN CEILING)

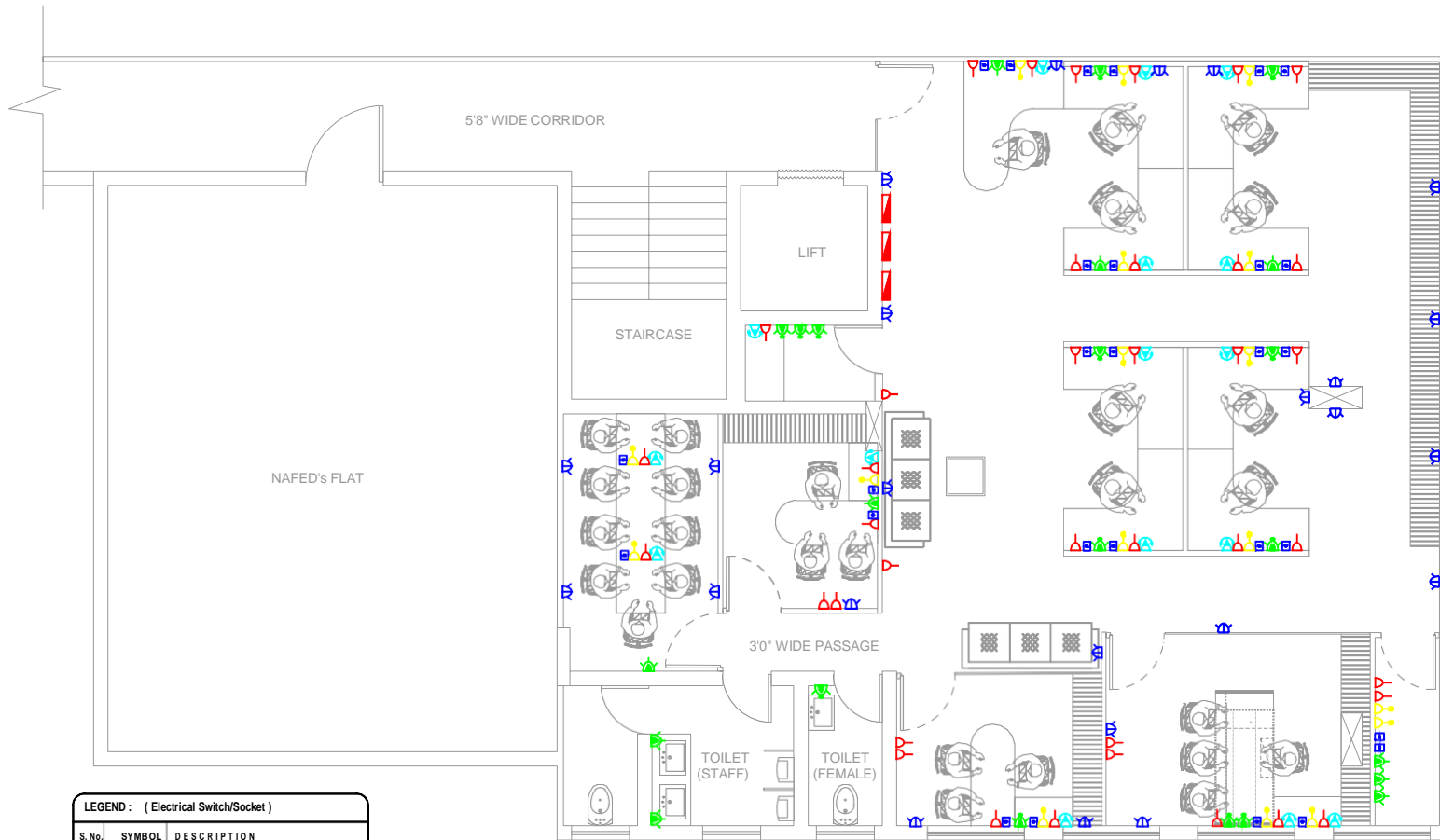
LIGHT FIXTURES LAYOUT

REVISIONS 31-12-2021 	DRAWN BY - ANKIT BHATIA DATE - 28-12-2021	TITLE INTERIOR-FURNISHING WORKS LAYOUT OF NAFED OFFICE AT CHENNAI.	CLIENT NAFED CHENNAI	DEZIGN INTERIO-ARCH SOLUTIONS	4/110, BASEMENT FLOOR FRONT SIDE, RAAMESH NAGAR, NEW DELHI-110015. MOB: 8527253808
	SCALE - NTS DRG.NO. - NAFED/2021/01 JOB. NO. -				



FALSE CEILING LAYOUT

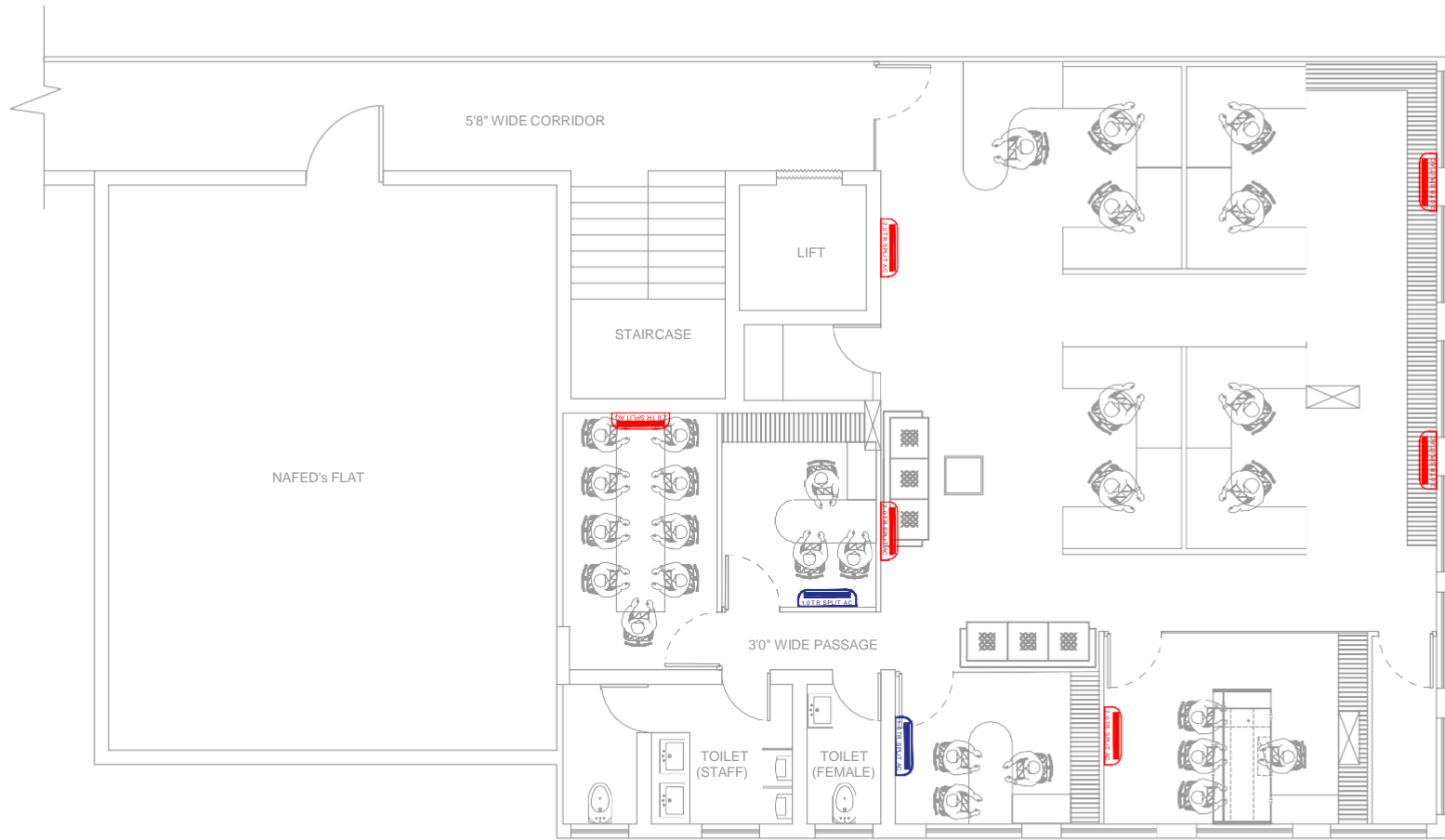
REVISIONS 31-12-2021 	DRAWN BY - ANKIT BHATIA DATE - 28-12-2021	TITLE INTERIOR-FURNISHING WORKS LAYOUT OF NAFED OFFICE AT CHENNAI.	CLIENT NAFED CHENNAI	DEZIGN INTERIO-ARCH SOLUTIONS	
	SCALE - NTS DRG.NO. - NAFED/2021/01 JOB. NO. -			4/110, BASEMENT FLOOR FRONT SIDE, RAAMESH NAGAR, NEW DELHI-110015. MOB: 8527253808	



FALSE CEILING LAYOUT

LEGEND : (Electrical Switch/Socket)		
S. No.	SYMBOL	DESCRIPTION
5.		5/16 AMP POWER POINT
6.		6 AMP PLUG POINT
7.		3 NOS. 6 AMP PLUG POINT (LPS)
8.		20 AMP. SWITCH FOR A/C UNIT
9.		6 AMP. SWITCH FOR WALL FAN
10.		DISTRIBUTION BOARD
11.		DATA POINT
12.		TELEPHONE POINT

REVISIONS 31-12-2021 		DRAWN BY - ANKIT BHATIA DATE - 28-12-2021 SCALE - NTS DRG.NO. - NAFED/2021/01 JOB. NO. -	TITLE INTERIOR-FURNISHING WORKS LAYOUT OF NAFED OFFICE AT CHENNAI.	CLIENT NAFED CHENNAI	DEZIGN INTERIO-ARCH SOLUTIONS <small>4/110, BASEMENT FLOOR FRONT SIDE, RAAMESH NAGAR, NEW DELHI-110015. MOB: 8527253808</small>



LEGENDS (SPLIT AC)	
	2.0 TR HIGH WALL SPLIT UNIT
	1.0 TR HIGH WALL SPLIT UNIT

AIR-CONDITIONING LAYOUT

REVISIONS	▼	DRAWN BY - ANKIT BHATIA	TITLE INTERIOR-FURNISHING WORKS LAYOUT OF NAFED OFFICE AT CHENNAI.	CLIENT NAFED CHENNAI	DEZIGN INTERIO-ARCH SOLUTIONS
31-12-2021		DATE - 28-12-2021			
.....		SCALE - NTS			
		DRG.NO. - NAFED/2021/01			
		JOB. NO. -			
					4/110, BASEMENT FLOOR FRONT SIDE, RAMESH NAGAR, NEW DELHI-110015. MOB: 8527253808

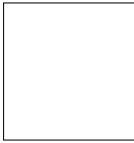



BOQ FOR THE PROPOSED INTERIOR FURNISHING, FURNITURE, ELECTRICAL & AC WORKS OF NAFED OFFICE AT CHENNAI.



INTERIOR-FURNISHING WORKS						
1 DISMANTLING						
S.No	Particulars	Quantity	Unit	Rate	Amount	Reference Image
1.1	Dismantling/Demolishing removing brick work,wall / fixtures, sanitary fixtures, furniture, storages, flooring, partitions, paneling, electrical wiring, cabling, AC, etc. to accommodate the proposed new layout and disposal of unserviceable material to a place permitted by the municipal authorities including making good any damages complete. No unserviceable dismantled material will be allowed to be accumulated at site. Decision of the architect/ employer as to what constitute unserviceable material will be final and binding. The amount should include cost for carrying out any other unforeseen items required for the proper execution of the work. All complete as per approval and instructions of the Architect/ employer.	1	L.S.			
1.2	Buy-back of dismantled old sanitary fixtures, furniture, storages, flooring, partitions, paneling, electrical wiring, cabling, AC, etc. Decision of the architect/ employer as to what constitute unserviceable material will be final and binding. All complete as per approval and instructions of the Architect/ employer. (Reserve Price Rs. (-) 20,000/-)	1	L.S.			
2 FINISHING WORK						
2.1	Providing p.o.p on walls of requisite thickness wherever plastic emulsion paint has to be done to make wall smooth, in parts wherever conduiting is done to match with existing pop and surface and line. The measurement would be done in 6",9",1'-0" widths x running length and paid in sq.m.).	155	Sq.m.			
2.2	Providing and applying three coats of pre-approved Plastic acrylic emulsion paint to walls, partitions etc. including surface preparation with two coats of putty, primer and sanding all complete. With the necessary drying periods for each coat. The final finish should be of a uniform and neat finish to the satisfaction of the Architect. Cost to be include for all height and surfaces.(Low VOC contain paint) Make: ICI DULUX ,Asian Paints	245	Sq.m.			
2.3	Wall painting with Texture paint interior grade of Unitile make or approved equivalent of approved shade and quality (2 or more coats) on new work to give an even shade including preparation of surface complete as directed. Make: Spectrum/Unitile/ pidilite/	25	Sq.m.			
2.4	SYNTHETIC ENAMEL PAINT					
	Painting with synthetic enamel paint of approved brand and manufacture of required colour two or more coats on new work over and under coat of suitable shade with ordinary paint of approved brand and manufacture to give an even shade. Make: Asian (Apolite)/ICI Dulux (Gloss)/Nerolac (Full Glass Hard Drying)	Sqm	30			
2.5	WOOD POLISH					
	Melamine polish with matt finish of required shade over doors, window shutters, jambs and soffits wooden panelling including removing and scratching the existing polish and repair works complete.	Sqm	20			
3 PARTITIONS/DOORS WORK						
3.1 FULL HEIGHT PARTITION / PANELING - FRAME WORK						
3.1.1	Providing and fixing G.I Frame for Partitions consisting of G.I vertical studs of size 50mm & horizontal members @ 600 x 600 or where ever required as per manufacturer, specs, using Gypsteel sections, hardwood will be inserted as may be required to fix door frames skirting etc. with all necessary fixing arrangement complete as per shown in drawing and directed by the Architect. Quote only for framework. All components to be of India Gypsum or LA gyp (la farge)					
	The cost to be included of 50 mm thick 24 kg/m3 density glass wool insulation inside the partition frame work including jointing and finishing. and To facilitate the skirting bottom channel to be cladded with 6mm marine plywood on both sides resist by 5-10mm groove on both sides. including Providing and fixing of prefabricated aluminium skirting as per product details, 50-75mm high of jeb/bottomline or equivalent make. all inclusive as per architects instruction.					
	FRAME WORK FOR FULL HEIGHT PARTITION: Frame work of Partition in G.I	sqm	226			
3.1.2	Providing and applying the claddings on the G.I framework erected for Solid partitions.					
	Cladding under this section shall be considered to be applied only to one side.					
	Cost for fixing plywood/ MDF etc. and fixing/cladding laminate/ veneer to be quoted as per case. Each side of the partition finishes will be measured as per the case.					


	Contractor to make provision for all electrical/ networking boxes and to provide 30mm dia cut-outs as required. Electrical/ Network boxes/ other services to be provided at desired height and location as indicated in the drawing or as instructed at site.					
	All junctions between materials, columns, walls, etc to have a 6mm groove with Aluminium 'L/ 'U' sections as per details. And all grooves joint and design pattern shall be included in quoted cost.					
	All exposed edges/ corners/ grooves to have proprietary corner/ edge bead sections/ channels as per Architect's instructions.					
	All exposed gyp board edges to be fixed with BeadEx self adhesive.					
	At all locations where services are penetrating the partition above false ceiling to have additional GI frame work around the duct/ cable tray/ pipe and the gaps between the frame work and service to be filled with appropriate acoustic sealant or with fire stop material as directed.					
	Approved make					
	Laminates: Formica / Greenlam / Durian / Merino					
	Veneer: Duro group B					
	Commercial/Flexible Ply: Century/ Green/ Garnet/ Alpro/Durian/ merino/ Duro					
3.1.2.1	SKIN TYPE-2 OVER GI FRAMING : 12 mm PLY + 6mm PLY + 4mm Veneer (Duro Make) / 1.0 premium finish laminate. one side of Partition/paneling. With groove, joints and design pattern as per drawing. The PLY should be Leed certified Green Products, FSC certified and CE certification. The cost is included necessary nail, screw and adhesive, melamine polish etc. all complete	sqm	300			
3.1.2.2	Providing and Fixing designer screens with necessary G.I framework above false ceiling to support or fix with screen with ceiling and same arrangement to made in floor.					
	GLO Panel Screen thickness 12mm. Providing & Fixing GLO Panels On back Drop wall of meeting lounge and visitors area as per design of panel approved or given by the Architect or as mentioned in detail drawings. The quoted cost to include making arrangement for fixing the designer panel in floor and same to be fixed in ceiling with G.I support above false ceiling lvl					
	GLO Panel base cost - 200 Rs. Sq.Ft leaving taxes and transportation charges	sqm	25			
3.1.2.3	Laser Cut Graphic / pattern in 19mm+19mm thk MDF					
	P/F laser cut shapes out of 19mm+19mm MDF. This will be installed on panel with 3m tap as located in plan. The quoted cost to include making arrangement for fixing the designer panel in floor and same to be fixed in ceiling with G.I support above false ceiling lvl	sqm	15			
3.2	Rubberwood paneling					
	Providing and fixing of 18mm pine board or rubber wood panelling with polish complete including design and grooves made as per details and approval of the architect.	sqm	35			
3.3	Providing and fixing AVG 50F Vertical Hedge (euronics make)	sqm	20			
3.4	GLASS PARTITION					
3.4.1	Providing and Fixing Full height straight glass partitions using 12mm thk toughened glass inclusive of the glass surface as indicated on the drawings and as per the instructions of the Architect. Glass to be fixed with SS "U" CHANNEL, concealed properly with requisite sealant within partition / MDF frame as per detail. All exposed edges of the glass shall be machine polished.All glass-to-glass joints to be sealed with pre-approved silicon sealants/ 3M tape, as required (GLASS MAKE Modiguard/Asahi float/Saint Gobain/Asahi India)	26	Sq.m.			
3.4.2	Providing and fixing partati onof black powder coated allum section 45x25mmx1.3 fix with 10mm thck toughned glass , with horizontal grid complete with necessary hardware(unidor partation pvt ltd)	25	Sq.m.			
3.4.3	Providing and fixing of Black coated 60x35x1.8 allum style door of size-2400x900 with 10mm thick toughned glass and Geze fitting complete with handle.	10	Sq.m.			
3.3	FULL HEIGHT GLASS door (12mm Thk ToughEened Glass door)					
	Providing and fixing Single/Double leaf glass door made of 12 mm thick toughened glass fixed on stainless steel fittings of required section of chrome finished,100mm high Stainless steel plate at top and bottom both side of the glass shutter as per drawing, including floor spring, patch fittings, SS top pivot, door handle, lock of approved make (sample approved by the Architect/ Client) and all necessary hardwares and fixing arrangement complete as shown in drawing and directed by the Architect. All glass-to-glass joints to be sealed with pre-approved silicon sealants/ 3M tape, as required make of Fitting as approved: Kich/ Ozone /Neki/ Dorma. & Glass Make : Modiguard/ Asahi float/ Saint-Gobain/Asahi India	6	each			
	with cylindrical locks and kitch handles both sides 30mm dia and 600mm long in buffed SS 304 finish.					
4	FALSE CEILING					
Note:	Quoted Rates are for all heights , scaffolding, depths, levels, leads and lifts and for all design and pattern shown in drawings					





	Contractor to include the cost of members & all required accessories for installation complete finished ceiling in his quoted rate				
	Actual finished area to be measured and paid for				
	Vendor Shall submit & get approved all type of board/Tiles /plank sample by Architect before execution.				
4.1	ARMSTRONG CEILING				
4.1.1	Modular Grid Ceiling				
	Providing and Fixing of false ceilings at all heights of 600mm x 600mm Grid ceiling tiles with Microlook Edge laid on prelude XL exposed silhouette grid systems with 15mm wide T- section flanges colour white. The framework comprise of main runner spaced at 1200mm centers securely fixed to the structural soffit by approved hangers at 1200mm maximum centers. Hangers (GI wire of 4.0mm dia) to be fixed by approved roof plug/ fastener, level adjusters and screws etc. The last hanger at the end of each main runner should not be greater than 450mm from the adjacent wall. Flush fitting 1200mm long cross tees (with double stitching) to be interlocked between main runners at 600mm centers to form 1200 x 600 modules. Cut cross tees longer than 600mm to be supported independently.				
	600mm x 600mm modules to be formed by fitting 600mm long flush fitting cross tees centrally between the 1200mm cross tees. Perimeter trim to be Armstrong wall angle secured to walls at 450mm maximum centers. The quoted rate shall be inclusive for making opening for light fixtures, diffusers & AC fittings. The quoted rate shall be inclusive of suspenders at all height & extra member required for all openings. (Basic rate of only ceiling tile Rs 500/- per Sq.m.)(Contractor to include the cost of members & all other accessories mentioned above in his quoted rate)				
	ARMSTRONG silhouette grid system	50	Sq.m.		
4.2	GYPSON BOARD CEILING				
4.2.1	Providing and fixing suspended false ceiling in microlook , which includes providing and fixing GI perimeter channels of size 0.55mm thick having one flange of 20mm and another flange of 30mm and a web of 27mm along with perimeter of ceiling. screw fixed to brick wall/partition with the help of nylon sleeves and screws, at 610mm centers. The suspending GI intermediate channels of size 45mm 0.9mm thick with two flanges of 15mm each from the soffit at 1220mm centers with ceiling angle of width 25mm x10mm x 0.55mm thick fixed to soffit with GI cleat and steel expansion fasteners. Ceiling section of 0.55mm thickness having knurled web of 51.5mm and two flanges of 26mm each with lips of 10.5mm are then fixed to the intermediate channel with the help of connecting clips and in direction perpendicular to the intermediate channel at 457mm centers. All sections, channels, etc to be in Gypsteel make as specified by manufacturer as per shown in drawing and directed by the Architect.	93	Sq.m.		
	12.5mm tapered edge Gypboard (conforming to IS-2095 - 1982) is then screw fixed to ceiling section with 25mm drywall screws at 230mm centers. Screw fixing is done mechanically either Finally the boards are to be jointed and finished so as to have a flush look which includes filling as finishing the tapered and square edges of the boards with jointing compound, paper tape and two coats of primer suitable for Gypboard and three or more coats of Acrylic emulsion paint (as per recommended practices of India Gypsum or equivalent) etc. complete including opening to be made for AC grills, light fittings, trap door etc. (Plan area to be measured and paid for) (cost to include paint cost) (all material including channels etc. Make: Lafarge (Boral)Gypsum/ Saint-Gobain/ India Gypsum/USG)				
4.3	Trap door for Gypsum False ceiling				
4.3.1	Providing and fixing trap door in false ceiling, made of 12 mm thick prelaminated particle board resting/ fixed including all hardware, hard wood lipping etc. complete as per drawing and drawing.				
	Make: Knuff Size: 600x600	4	no.		
4.4	Wooden False Ceiling				
	Wooden Veneer Ceiling				
	Providing & fixing Wooden veneer false ceiling comprising of the following:				
	4mm thick veneer finish (Duro) over 12mm thick commercial ply (Century/ Green/ Kitply/ Garnet) with hard wood (Beechwood) frame of required section fixed to wall & ceiling with necessary nails & screws as required and as per drawing.				
	Veneer Make: Duro , Commercial Ply Make: Century/ Green/ Kitply/ Garnet				
	veneer finish wood beading all around as required.				
	Including all necessary nails, glues, teak wood lipping, melamine polishing, wood preservative paint, fire retardant paint, brushed steel hinges for trap door shutter including making opening for lights, AC grills etc. complete as per design and drawing. (Contractor to include the cost of members & all required accessories for installation complete in his quoted rate)				
A	Same as above but with 4 mm thick veneer (Basic Rate 4,500/- per sq.m.)	20	Sq.m.		



4.5	Baffle ceiling					
4.5.1	Supply & install Aluminum Baffle Ceiling system consist of pre-painted GI of 0.4mm folded sections, centre to centre distance between baffle is 125mm & baffle to baffle distance is 100mm.(which can be modified as per Agency/designers requirement). The baffles shall be fixed to each other using mild steel framework of size 30mmx100mm made using 1mm thick MS sheet which is folded and bend to desired profile finished with powder coating. These mild steel framework/sections shall be inserted between two members and fixed using self interlocking system. The mild steel framework in turn are fixed on to the true ceiling above using a suitable suspension system consisting of bolts, nuts, hangers, 6mm GI rod and anchor fasteners. Rate to includes necessary supports as per manufacturer specification. Powder Coating Colour:- as per approved design.	40	Sq.m.			
5	ROLLER BLINDS					
5.1	Roller Blinds- Normal					
	Providing & fixing roller blinds comprising of polymer coated fibre fabric with minimum openness factor of 3% as per AS standards. The fabric shall be fire retardant and have high heat reflection ratios. The roller mechanism shall be a moulded unit made from engineering grade plastic polymer with steel spring support. The fabric shall be finished on the sides with edge tape duly welded for waviness control. The fabric shall be attached to the roller tube with high quality self adhesive tape. Average width of blinds shall be 2000mm and fall of 3000mm with manual operation.					
	Headrail: shall be .812" high x 2" deep extruded aluminum headrail with a wall thickness of 0.045" and painted to coordinate with fabric color.					
	Cord lock: shall be a snap-in design of injection-molded thermoplastic incorporating a metal, free-floating, serrated cord-locking roller.					
	Lift cord: shall be 1.2mm polyester and concealed for a clean appearance. A snap tassel and joiner ball connect to a single Danskord for raising and lowering the shade. Cord, tassel and joiner ball are color coordinated with fabric.					
	Installation: Bracket shall be low profile, hidden snap-in design made of 0.025" zinc-plated spring steel.					
	Bottomrail: shall be 0.375" high x 2" deep extruded aluminum with a wall thickness of 0.045" and painted to coordinate with fabric color.					
	Fabrication Shades shall be fabricated according to specifications and accurate to tolerance established by SWF engineering standards					
5.1.1	Basic Cost: Rs 4500 per sm + taxes	30	Sq.m.			
	make: Hunter douglas/ Roselle/winfab					
	TOTAL OF INTERIOR-FURNISHING WORKS					
6	FLOORING WORK					
S.No	Particulars	Quantity	Unit	Rate	Amount	Reference Image
Note:	(Quoted Rates are for all heights, depths, levels, leads and lifts and for all design and pattern shown in drawings)					
	Stones shall be procured in slabs of varying sizes quoted rates also to include cutting of stones as per required sizes from slab. Note: Actual finished area to be measured and paid for.					
	Note :- Vendor Shall submit & get approved all type of stone/Tiles sample by Architect before execution.					
	Make Vitrified Tiles: Granito/ Kajaria/ Restile/ Somany/Johnson/ Nitco					
	Make Ceramic Tiles: Kajaria/Somany/Bell/Nitco/Asian					
6.1	Providing and laying polished granite stone in choice shade laid in floors and counter tops over 20mm (average) thick base of cement mortar 1:4 (1 cement :4 coarse sand) followed by laying and fixing with highly polymer single component adhesive of LATICRETE / BAL ENDURA or equivalent with minimum 6 mm thickness and jointed with white cement slurry mixed with matching pigment, including rubbing and polishing and curing etc. complete at all levels. (Sample of stones shall be got approved by Architect. Basic cost @Rs. 250/- per sq.ft.)					
6.1.1	item same as above in flooring, Staircase steps, landing etc. the cost shall be included with necessary groove, joints chamfer, all complete as drawings to be provided by the architect/as per instruction of site in charge.	6.5	Sq.m.			
6.1.2	item same as above in skirting, risers of steps, Ledge of pantry counter etc., on 12mm thick cement plaster 1:3 (1 cement : 3 coarse sand) with necessary groove, joints chamfer, all complete as drawings to be provided by the architect/as per instruction of site in charge.	3	Sq.m.			




6.2	Providing and laying 10-12mm thick Dual charged Vitrified tiles of Kajaria/ Marbonite/ Somany/ Nitco make or approved equivalent and of approved shade of size as per drawing in floors over 20mm (average) base of cement mortar 1:4 (1 cement :4 coarse sand) required thickness to match finished floor level mentioned and to match the neighboring floor finish and jointed with epoxy grout of approved shade from Bal Endure or equivalent brand all complete as directed complete. Rate to include forming pattern in the flooring like border, skirting, cut tiles, Protecting of the tile till hand over date by POP., etc all complete as per detailed architectural drawing.					
	same as above With Vitrified Tiles of Base rate of Vitrified tiles Rs. 80/- per Sft leaving taxes and freight and loading un loading charges)	160	Sq.m.			
6.3	Providing and fixing William Tape for protecting floor & glass from dust during construction .Item includes removing the tape after completion of work and cleaning the area.	160	Sq.m.			
6.4	Wooden Flooring					
	Providing and fixing minimum 11mm thick Engineering wooden flooring suitable for commercial-heavy use areas like auditorium application of approved make, shade and pattern. The top surface shall have a 0.60 mm thick multi layer high pressure laminate fixed over moisture resistant high density fiberboard substrate. The planks shall be of size:1200mmx200/125mm. The flooring shall confirm to JIS Z 2801:2000 standards. The planks shall be placed on an underlay of 0.2mm thick alkali resistant Polyethylene sheet having density 920-935kg/ m3 to resist moisture from the sub floor and to secure the floor installation etc all complete. (Skirting profiles, trims etc shall be included & not paid extra) etc all complete as per detailed architectural drawing. Make Pergo Original/ Floor Master/Ego/Span (basic cost Rs. 3200 / per sqm leaving taxes and freight and loading un loading charges)	25	Sq.m.			
6.5	Tile Dado					
	Providing and Laying tile dado of approved make, shade and pattern as approved by Architect, with epoxy grouting ,making grooves using 2/ 3mm PVC spacers and epoxy grouted with tile groute of matching shade of tile including cutting, grouting the joints with epoxy grout of endure or equivalent and pigment to match the shade of tile including cutting, etc. complete in all respects as per pattern and drawing.					
A	With Tile (Basic rate of tiles Rs. 180/- Sft leaving taxes and freight and loading un loading charges) for Toilet & pantry highlighter on walls	sqm.	60			
B	With Tile (Basic rate of tiles Rs. 150/- Sft leaving taxes and freight and loading un loading charges) for Toilets & pantry walls other then highlighter	sqm.	15			
TOTAL OF FLOORING WORK CARRIED OVER TO SUMMARY						
7	MISCELLANEOUS ITEMS					
7.1	Providing and Fixing Logo for NAFED WITH TEXT AND LOGO for main reception area made with S.S and Back Led lighting of approved color as shown in drawing or as directed by the architect.	1	each			
7.2	Providing and Fixing Signage in area's such Lift Lobby for Floor Indication etc.					
7.2.1	Toilet signages (Gents)- on door : Acrylic ducopainted signage with text / graphics in 3M grade vinyl Size : 200 mm wide x 200 mm tall * sign mounted on door	1	each			
7.2.2	Toilet signages (Ladies)- on door : Acrylic ducopainted signage with text / graphics in 3M grade vinyl Size : 200 mm wide x 200 mm tall * sign mounted on door	1	each			
7.2.3	Floor Level Indicator - wall mounted : (LIFT LOBBY) Acrylic ducopainted signage with text / graphics in 3M grade vinyl Size : 317 mm wide x 317 mm tall * sign mounted on wall	1	each			
7.2.4	Cabin Naming (In vinyl on glass) : Ht. 30mm, Font : Expert sans regular, Length Max. 450 mm Ref. : Colour 100 % cyan. 4 colour process C100 MO to KO. RGB : R0 G164 B232	4	each			


7.2.5	Desk Numbering	8	each			
7.2.6	Supply & Installtion of Pull - Push Signages : Brush finish stainless steel etched signs Size : 2.5"(H) x 2.5"(W) set includes 1 pull & 1 push	5	each			
7.2.7	Supplying and installing Interior film (marble texture) of approved shade as per approval.	100	sq.m.			
7.2.8	Providing and fixing of 8mm th Black acrylic cut letter (100-150 mm ht) of designated zone	15	sq.m.			
TOTAL OF MISCELLANEOUS WORK CARRIED OVER TO SUMMARY						
8	BRICK WORK / WINDOWS					
8.1	115 mm (4 1/2 ") thick brick masonry in first class bricks/brick tiles in superstructure at all levels above plinth in cement mortar 1:4 (1 cement: 4 coarse sand) with 1 No. 6mm dia M.S. bar after every fourth course complete including the cost of steel bars.including plaster 1:4) on both sides of wall, including casting lintels for doors.	49	sq.m.			
8.2	UPVC WINDOWS					
	P & F of UPVC windows made out of hollow Multi-Chambered UPVC Sections with isolated drainage and reinforced with galvanized steel. The corners and joints shall be mitre cut and fusion welded. The overall dimensions of windows are as per existing windows with wall thickness of frame being 2.3mm ± 0.3mm. Openable Frame with shutters (internal of window) for Mosquito Sash shall be provided. The Window System shall be externally glazed with single glazing in 6mm glass. window installation shall be executed through specialized agencies authorized by the manufacturers. The windows shall be installed so as to provide a completely water proof and air tight solution for the purpose.The UPVC profile of frames and sash shall be mitred cut and fusion welded at all corners, including drilling of hole for fixing hardware & drainage of water etc. making arrangement for fixing hardware, EPDM gasket, with 1.2 +_ 0.2 mm thick galvanized steel profile to be inserted in required profile, frame shall be fixed to the wall with 8 mm x 100 mm long fastners all complete as per direction of Architect. All screws to be used shall be of S.S of make as approved by the Architect. Glazed window shall consist mainly of : 1. Casement frame of size : 67 mm x 62 mm 2. Casement window sash/mullion (67 mm x 75 mm) 3. Casement glazing bead (35 mm x 18 mm) 4. S.S - 304 grade, friction hinges of size 250 x 19 x 1.9 mm. 5. Tinted single glazing of thickness 5.5 mm with necessary gasket. 6. Multi-point lock with handles.	35	sq.m.			
	Note: The new windows shall be installed after removing the existing M.S framed windows. After installing the new windows proper sealing shall be done by the installer so as to ensure that there is no leakage of water, and outside making sides/edges & slope. (All plastering, scaffolding, removal of debris is included in the cost.)					
TOTAL OF CIVIL WORKS CARRIED OVER TO SUMMARY						
9	FURNITURE					
9.1	TABLES					
9.1.1	P/F Conference Table as per design 11'-0" Running feet and approx 26" wide made up of 18mm thick commercial ply with modesty panel, top side finished with 12mm thick solid acrylic top (Corian Top) of make Dupont / Samsung etc. with 2" high corian edges (basic rate of Rs. 1800/- per sq.ft. excluding taxes and transportation) in approved color and counter side in white color. Legs all visible areas with 4 mm veneer as per drg/detail with pencil drawer, as per drg/detail melamine polished on legs , with 1.5"x1.5" european/german steamed beech moulding on all edges sides and at 100 mm high skirting level. All mouldings melamine polished. The contractor to use flexible ply for the curved portion and 20% on both sides of conference table to have 6mm thick solid acrylic top (Corian) and also to integrate wiring for 1DATA /1VOICE /1AUDIO / 1VIDEO / 1 UPS or 5 amp normal point point etc. The contractor to put CABLE CUBBY FLIP SOCKET (2 no.)	Nos.	1			

9.1.2	RECEPTION Table Size: Reception Table Size: 3600 x 750 : Providing and fixing of reception table at location of size 3600mm x 750mm , as per design 1050 mm height of transaction counter and other is 750mm height of table. Table to be made of 19mm thick ply/commercial board with necessary framing in TW. Table to have two levels, writing level at 750 mm height and transaction level at 1050mm height. Transaction top, work top, front and sides of the reception counter to be finished with 12mm thick solid acrylic top (Corian Top) of make Dupont / Samsung etc. (basic rate of Rs. 1800/- per sq.ft. excluding taxes and transportation) in approved color as per drg/detail. and rest to be finished in Veneer finish. The exposed surface of storage to be finished in veneer finish and all other internal surface to be finished in 1mm laminate of approved shade.	Nos.	1			
9.1.3	P/F Tables of 2'-6" height made ¾ " th comm board for tables made out of 19mm comm block board for tables/12 mm thk. flexible ply in designs wherever required as per design, with modesty panel, file drawers, all visible areas to be finished with 4mm veneer, top side finished with 6mm thick solid acrylic top (Corian Top) of make Dupont / Samsung / etc. (basic rate of Rs. 1800/- per sq.ft. excluding taxes and transportation) in approved color as per drg/detail with pencil drawer, file drawer ,3",6" drawer etc , 3"x 2" steam beech wood leg rest, european/german steamed beech ¾"x ½" mouldings on margin and 1 1/2"x 1 ½"European/German Steamed Beech moulding on all edges sides and ¾" X ¾" Ex Steam beech moulding melamine polish at 2" high skirting level with all necessary hettich/ haffle channels, Keyboard and channel ,handles ,hardware, all drawers with telescopic channels and all handles to be stainless steel. as per drgs per design /architect's instructions, (Includes the cost of ¾" X ¾" ex steam beech moulding melamine polish at bottom bands) Godrej locks & SS handles as per approved sample.					
A	Table of size 9'0" x 2'-4" x 2'-6" high. (For Workstations) in curve profile	Nos.	8			
B	Table of size 7'0" x 3'-0" x 2'-6" high with side credenza / table of size 3'6" x 1'-6" x 2'-4" to 2'-6". (For Head) without corian top (in veneer finish top only)	Nos.	1			
C	Table of size 5'3" x 2'-3" x 2'-6" high with side credenza / table of size 3'0" x 1'-6" x 2'-4" to 2'-6". (For Officers) without corian top (in veneer finish top only)	Nos.	2			
9.2	CHAIRS / SOFAS / CENTER TABLES					
9.2.1	CHAIRS (Make : Durian / Godrej / Steelcase)					
1	Supplying, and placing in position of 360 degree revolving High back chair as per Image. This contemporary chair comprises of luxurious double padding cushion with a central indent that provides lower back support for proper posture and comfort. The central panel in the backrest is neatly stitched with a soft seat cushion finished in the same black leatherette. The Chair nestles on a shiny chrome vaulted base with nylon castors. the shiny armrests come adeptly padded for comfort. Material & Subtype:Leatherette, Colour & Colour Family:Black Dimension(W)625mm X (D)490mm X (H)1210mm, Back Type: High Back, Base:Chrome Base, Base Type:Revolving, Maximum Seating Height:25", Minimum Seat Height:21.25",Function: Revolving::Pneumatic Height Lift::Tilt Tension Control::Centre Tilt, Locking Mechanism:Centre Tilt. The pneumatic height adjustment shall have adjustment stroke of 100 mm and shall be operated at 30kgs extension force.The Seat & back are made up of 12mm thk hot pressed plywood upholstered with PVC with polyurethane foam, chair seat has foam of density 32-35 kg/m3 . The backrest has a foam of 28kg/m3. The product should be from the manufacture of Approved make Godrej/ Durian/ HNI/Steelcase. Complete as per reference image and specification as mentioned above under the guidance of Engineer in charge. [For Head Cabin]	Nos.	1			

2	<p>Supplying, and placing in position of 360 degree revolving medium back chair as per Image. A contemporary design with an all black finish, the chair is a staple in every office setting. A double padded cushion encased in an all black premium eatherette makes for one comfy seat. The side padding and the headrest sit snugly providing added lumbar support to the user. Material & subtype:Premium Leatherette, Colour & Colour Family:Black, Dimension(W)625mm X (D)490mm X (H)1135mm, Back Type:medium back, Base:Chrome Base, Maximum Seating Height:19",Finish:Matte.The pneumatic height adjustment shall have adjustment stroke of 100 mm and shall be operated at 30kgs extension force.The Seat & back are made up of 12mm thk hot pressed plywood upholstered with PVC with polyurethane foam, chair seat has foam of density 32-35 kg/m3. The backrest has a foam of 28kg/m3. The product should be from the manufacture of Approved make Godrej/ Durian/ HNI/Steel case. Complete as per reference and specification as mentioned above under the guidance of Engineer in charge. [For Head Cabin Visitors]</p>	Nos.	3			
3	<p>Supplying and placing in position of 360 degrees Revolving high Back chair of size :- (W)660mm X (D)490mm X (H)1315mm . The chair have Mesh back with Adjustable Lumbar Support. The breathable mesh back chair with cushioned fabric seat with moulded foam shall be ergonomically design with Adjustable lumbar back support .Function: Synchro Single Locking echanism.Adjustable Armrest (Up-Down), Adjustable Headrest(Can Adjust Movement). Sitting on a vaulted chrome base the chair is powered by Nylon Castors. Maximum Seating Height :560mm.The pneumatic height adjustment shall have adjustment stroke of 100 mm and shall be operated at 30kgs extension force. The Seat are made up of 12mm thk hot pressed plywood upholstered with PVC with polyurethane foam, chair seat has foam of density 32-35 kg/m3. The product should be from the manufacture of Approved make Godrej/ Durian/ HNI/Steel case. Complete as per reference image and specification as mentioned above under the guidance of Engineer in charge. [For Officers]</p>	Nos.	2			
4	<p>Supplying and placing in position of 360 degrees revolving medium back chair as per photograph. The breathable mesh back chair with cushioned fabric seat shall be ergonomically design with adjustable lumbar back support . The chair shall be provisioned with adjustable armrest (Up-Down) with PP padding and Adjustable Headrest(Can Adjust Movement). The seat cushion to be upholstered on 10-12mm thick water proof plywood and moulded foam. The seat to be made with 12 mm thick hot pressed BWR plywood (IS grade - 303) uholsetered with Polyurethane foam and mesh fabric over it. The chair shall be provided with self tension single locking mechanism and pneumatic height adjustment which shall have stroke of 10.0 +/- 0.3 cm.The black Five star chrome base with hooded nylon castors..The pneumatic height adjustment shall have adjustment stroke of 100 mm and shall be operated at 30kgs extension force.The Seat are made up of 12mm thk hot pressed plywood upholstered with PVC with polyurethane foam, chair seat has foam of density 32-35 kg/m3. The product should be from the manufacture of Approved make Godrej/ Durian/ HNI/Steel case. Complete as per specification as mentioned above under the guidance of Engineer in charge. [For Officers Visitors]</p>	Nos.	4			
5	<p>Supplying, and placing in position of 360 degree revolving medium back chair as per Image. The chair Ergonomically design approved by All India Occupational Therapist Association for back curve & support. The medium back chair having a mesh back with djustable Lumbar Support. Fabric Upholstered seat with Moulded Foam with Synchro Single Locking Mechanism.Adjustable Armrest (Up-Down).The chair is fixed to a sleek chrome vaulted base with its individual prongs powered bysmooth nylon castors.Dimension (W)641mm X (D)490mm X (H)1080mm,Revolving::Pneumatic Height Lift::Self Adjusted Mechanism::Adjustable Armrest,Maximum Seating Height: 533mm. The pneumatic height adjustment shall have adjustment stroke of 100 mm and shall be operated at 30kgs extension force. The Seat are made up of 12mm thk hot pressed plywood upholstered with PVC with polyurethane foam, chair seat has foam of density 32-35 kg/m3.The product should be from the manufacture of Approved make Godrej/ Durian/ HNI/Steel case. Complete as per reference image and specification as mentioned above under the guidance of Engineer in charge. [For Conference Room & Workstations]</p>	Nos.	18			
9.2.2	CENTER TABLE / SOFAS					

1	Supplying, and placing in position of centre table as per Image . Contemporary chic design centre table.Rectangular clear tempered glass top.Inbuilt metal rods on both the side of the wooden base.Froasted glass shelf.Material & Subtype:Glass -8mm thk Tempered Glass, Colour & Colour Family:Black, Shape:Rectangular, Finish:Glossy. The product should be from the manufacture of Approved make Godrej/ Durian/ HNI/Steel case. Complete as per reference image and specification as mentioned above under the guidance of Engineer in charge.	Nos.	2			
2	The sofa seat & back are made out of solid pine wood with hot presses plywood and upholstered with leatherette. The sofa moulded with polyurethane foam with minimum of 32kg/m3 density . The seat cushion is made of multi layered foam of density 35-38kg/m3. The seating cushion have 2.75 & 1.75 inches of elastic webbing. The thread used is nylon bonded to provide lasting stitch strength . The backrest has a foam of 28kg/m3 with polyester polyfill outer layer of 200 gsm. The polyester polyfill keeps the upholstery wrinkle free & soft. The product should be from the manufacture of Approved make Godrej/ Durian/ HNI/Steelcase. Complete as per reference image and specification as mentioned above under the guidance of Engineer in charge.	per seat	6			
TOTAL OF CIVIL WORKS CARRIED OVER TO SUMMARY						
10 STORAGE FULL / LOW HEIGHT / CREDEENZA						
10.1	Providing and fixing low/full height storage of following size storage: fabricated out of 19mm BWP commercial board in 1.0mm thk approved laminate from the outside and 0.8 mm laminate on the inside. All storages to have a backing of 12 mm thk MARINE PLY. rate to include back splash of 150mm above the counter in same finish. Shelves also to be lined with 1 mm laminate from inside. All exposed edges to be finished with 2mm thk PVC edge binding or TW edge duco painted as per detail drawings. Cost of the storage units to be inclusive of brushed steel finish handles, SS soft close hinges, tower bolts, Shutter magnets (Medium), locks, tower bolts, magnetic ball catch, hinge etc and all necessary hardware of approved make all complete as per drawing and detail and as per the instructions of the architect. The storages to have a support member of SS brushed steel section as per detail/design/design as provided by the Architect. Note only BWP Board to be Used					
10.1.1	Pantry under counter & overhead storage & toilet under counter storage Size: same as above but Size of length as per layout x 600mm x 800mm Ht.	Sq.mt	3			
10.2	P/F low height 1'-6" to 2'0" deep(area calculated as length x breadth) storage in cabins as / dwg.made up of 19mm commercial block board shutters,sides & shelves with melamine polished european/german steamed beech 3/4"x 1/2" mouldings on margin and 1 1/2"x 1" European/German Steamed Beech moulding on all edges sides and 3/4" X 3/4"Ex Steam beech moulding melamine polish at 2" high skirting level . 6mm plywood back,with 1mm thick laminate on all visible surfaces leaving storage table top. The low heighted storage top side finished with 12mm thick solid acrylic top (Corian Top) (basic rate of Rs. 1800/- per sq.ft. including taxes and transportation) in approved color as per drg/detail with enamel/plastic base on inner surfaces, mounted on powdercoated hinges, including efficient gadgets locks. C 4" stainless steel handles, and magnetic ball catchers with necessary hettich/haffle hardware, SS tower bolts (300x10 mm), hinges, godrej locks and SS handles as per architects instructions including shelves as per design .	Sq.mt	9			
10.3	P/F full height 1'-6" to 2'0" deep(area calculated as length x breadth) storage in cabins/working hall area as / dwg.made up of 19mm commercial block board shutters, sides & shelves with melamine polished european/german steamed beech 3/4"x 1/2" mouldings on margin and 1 1/2"x 1" European/German Steamed Beech moulding on all edges sides and 3/4" X 3/4"Ex Steam beech moulding melamine polish at 2" high skirting level . 6mm plywood back, with 1mm thick premium laminate on all visible surfaces in approved color as per drg/detail with enamel/ plastic base on inner surfaces, mounted on powdercoated hinges, including efficient gadgets locks. C 4" stainless steel handles , and magnetic ball catchers with necessary hettich/haffle hardware,hinges, godrej locks, SS tower bolts (300x10 MM) and SS handles as per architects instructions including shelves as per design .	Sq.mt	14			
Total to be carried over the summary						
11 SANITARY WORKS						

11.1	Providing and Fixing G.I. pipes (medium quality of Jindal/Tata make complete with galvanised iron fitting (UNIK) brand or all descriptions, such as tees, elbows, reducers, clamps, suspenders, unions, check nut bends etc., including cutting, threading, chasing and making good the walls, floors RCC work etc., and filling the same with cement concrete 1: 2: 4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size) after embedding the pipes, including painting the pipes (with desired shade of 2 coats enamel paint over coat of primer, where pipes are exposed) and painting with 2 coats of anticorrosive bituministic paint including necessary excavation upto the required depth, in trenches and back filling, and covering the pipes with 75mm thick sand all around the pipes, complete, as per detailed specifications and P/F C.I. (R.I.F.) pipes and Making necessary additions to existing CI and G.I pipe work including new work for G.I and C.I upto connection in all floors in one pantry and two water cooler points .Including shifting of points, if required, and sealing of joints including waterproofing and P/F all p traps etc complete. Yhe cost to include p/f 200 ltrs. Sintex water tank including necessary frame work on M.S Angles, connections (internal & external) in each toilet and pantry up to satisfaction of the architect.					
A	For ONE PANTRY , TWO TOILETS	LUMPSUM	3			
B	P/F Powder coated Square/Round C.P. jali (chilly make)125 mm on floor trap.	No.	6			
11.2	Providing and fixing kitchen sink with RS CI brackets under granite top, CP brass chain with rubber plugs 40mm C.P. brass waste and 40mm C.P. brass trap with necessary unions complete including painting and fitting, cutting and making good the walls wherever required: a) Stainless steel sink (AMC / Neelkanth/Nirali) with drainboard size 400 x 350 x 152mm.	No.	1			
11.3	Providing and Fixing 15mm nominal bore C.P. brass kitchen mixer with swiveling spout (hot and cold) and deluxe head of approved make. Jaquar of basic price (Rs. 2500/- each)	No.	1			
11.4	Providing and Fixing white glazed vitreous china single trap syphonic pattern having back inlet ,supporting Cast iron chair ,wall hung water closet with composite Concealed cistern (European type) water closet with seat and lid, with C.P. brass hinges and rubber buffers, adapter, rubber joints fixed to W.C., C.P. brass screwed washers including cutting and making good the walls and floors wherever required and HDPE WC pan connector including jointing with Ivory cement coomplete in all respects.					
	Wall hung W.C. pan with white plastic seat & lid "Thermoset moulded (bakelite) IS 2548 Part I Model no Veil wall-hung toilet K-75708IN-0 cost with WC , concealed Kholer cistern & Kholer fittings all included	No.	2			
11.5	Providing and fixing white glazed vitreous china wash basin with R.S. or C.I. brackets painted Ivory, C.P. brass chain with rubber plug 32mm C.P. brass waste of standard pattern, 32 mm dia. C.P. brass bottle trap and union 32 mm dia C.P. pipes to wall flange. complete including cutting and making good the walls wherever required. Model no: Parliament Vessels lavatory - K-14715IN-1, leavinf cost of angle valves .	No.	3			
	Square wash basin 560x440mm for mounting under the counter with 15mm C.P. brass single hole mixing fitting.					
11.6	Providing fitting and fixing vitreous china flat back type lipped front urinal basin of with manual flushing cistern with standard flush pipe and CP brass spreader and brass unions, etc.all complete including painting of fittings and brackets, cutting and making good the walls & floors wherever required. Model no: Bardon urinal - K-4904-ET white colour	No.	2			
11.7	Providing fitting and fixing Urinal Divider plate of Toughened glass as per detail. including fitting and fixing all compete as directed. Make Jaquar Model no- IARA : 1810-UC size 900x450x8mm	No.	2			
11.8	Providing And Fixing 15 mm dia C.P. brass angle valves(kholer make) with C.P. copper connecting pipe union nut C.P. cast brass wall flange.	No.	16			
11.9	Providing and fixing C.P. brass finish toilet paper holder(Kholer/equivalent) of approved make complete .	No.	2			
11.10	Providing ad fixing C.P. brass health faucet with angle valve complete. (all Kholer make)	No.	2			

11.11	Providing And Fixing 15mm dia C.P. brass single lever wash basin Mixer for wash basin (all kholer make)	No.	3		
11.12	Providing and Fixing liquid Dline soap dispenser in AISI316 SS grade in stain finish. with indicator , and brackets fixed to wooden cleats with C.P. brass screws.				
A	Euronics SS soap dispenser (800 ml) (model no ES 04)	No.	3		
11.13	Providing & fixing Euronics Stainless Steel Hand Dryer (model No. EH26) including all necessary fitments and accessories complete up to satisfaction of the architect.	No.	3		
Total to be carried over the summary					
I.I.O ELECTRICAL WORKS					
1	Wiring for light point / fan point/exhaust fan/ / light socket switch with 3X1.5 (P+N+E) sqmm copper conductor FRLS insulated 1100v grade multi strand wire in concealed / surface using 20/25/32 rigid MS conduit 16SWG thick with all bend, tees, saddle mounting box, cover plate ceiling rose, etc. wherever required etc. & chromium plate brass screw/rawl plug etc..The circuit wiring start from DB to point control box /switch box using 3x2.5 (P+N+E) sqmm copper conductor FRLS insulated 1100V grade multistrand wire with notification ferrules at both end complete in all respect. The conduit must be fixed with MS saddle at every 80cm on surface and conduit to be laid in ceiling with proper clamps/wall floor filling the chase with cement mortar and finish the same in original form/wooden partition above false ceiling chases filled with cement mortar as required at site Each circuit shall have separate earth wire.All switch socket must be for modular type with M.S. Boxes and plate etc. as required. Note:-.Each circuit shall have independent earth wire each point shall be earthed. Circuit wiring is to be included in wiring.				
1.1	One light controlled by one 6A modular one way switch.	3	Nos		
1.2	Two light controlled by one 6A modular one way switch.	11	Nos		
1.3	Three light controlled by one 6A modular one way switch.	16	Nos		
1.4	Four light controlled by one 6A modular one way switch.	6	Nos		
1.5	Six light controlled by one 6A modular one way switch.	2	Nos		
1.6	Eight light controlled by one 6A modular one way switch.	1	Nos		
1.7	One 5 pin 5 amp shuttered socket outlet with 5 amp switch	42	Nos		
2	Wiring for Exhaust fan point with 2.5 sq. mm. insulated copper conductor 1100 volts grade stranded flexible FRLS wires of approved make in 25 mm dia heavy duty FRLS PVC conduit including providing & fixing of 6 amps flush mounted switch at the normal switch level in 1.6 mm thick GI box and 6 amps 3 pin flush mounted socket near exhaust fan and earthing of exhaust fan through the third pin of the socket outlet and GI box with 2.5 sq.mm. PVC insulated copper conductor flexible FRLS wire.	3	Nos		
3	WIRING FOR Three nos. 6A Universal UPS power socket outlet Shuttered controlled with one no. 16A switch mounted side by side with 2 x 2.5 sq.mm. PVC insulated single core FRLS flexible copper conductor in concealed/exposed RIGID PVC conduits 2mm thick and EARTHING WITH one no. 1.5 sq.mm. insulated green color earth wire.(Max. 3 Points to be looped from one circuit). All switch socket must be for modular type with M.S. Boxes and plate etc. as required.	17	Nos		
4 POWER POINTS					
4.1	Wiring for 250 volts single phase and neutral 16 amps switched socket outlet with 4 sq.mm PVC insulated copper conductor 1100 volts grade stranded flexible FRLS wires in concealed or surface mounted 25 mm dia with heavy duty FRLS PVC conduit including providing and fixing of 16 amps 3 pin switched sockets of approved make and design in 1.6mm thick GI box with grid plates and earthing the third pin of each socket outlet with 4 Sq mm PVC insulated copper conductor stranded flexible FRLS wire (Power points). Note: Circuit wiring to be included and one power point to be in one circuit.All switch socket must be for modular type with M.S. Boxes and plate etc. as required.	23	Nos		
5 AC POINTS					

5.1	Wiring for 250 volts single phase and neutral 20 amps switched socket outlet with 6 sq.mm PVC insulated copper conductor 1100 volts grade stranded flexible FRLS wires in concealed or surface mounted 25 mm dia with heavy duty FRLS PVC conduit including providing and fixing of 2 Nos. 20 amps each 3 pin switched sockets of approved make and design in 1.6mm thick GI box with grid plates and earthing the third pin of each socket outlet with 4 Sq mm PVC insulated copper conductor stranded flexible FRLS wire. Note: each point to be one circuit.(Contractor should note and quote that there are 2 nos 20 amp each 3 pin switch socket of modular type with MS boxes to be installed with each point)	10	Nos			
6.0 DISTRIBUTION BOARD						
6.1	Supplying & fixing following way, three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/recess, complete with tinned copper bus bar, neutral busbar, earth busbar, din bar, detachable gland plate, interconnections powder painted including earthing etc. Make : Legrand-Lexic / L&T / Hager / ABB / Schneider-Acti 9					
6.1.1	8 way TPN DB, 21 Nos. 16/32 amps SP MCB's as outgoing with 1 No. 63 amps 4 Pole MCB as incomer with separate neutral link for each phase. (Light & Power DB)	Nos.	1			
6.1.2	6 way TPN DB, 10 Nos. 16/32 amps DP MCB's as outgoing with 1 No. 63 amps 4 Pole MCB as incomer with separate neutral link for each phase. (AC DB)	Nos.	1			
6.1.3	12 way SPN DB 10 nos. 10 amps SP MCB as outgoing with 1 no. 40 amps 2 pole MCB's as incomer including neutral. (FOR UPS DB)	Nos.	1			
6.2	P/f Ino. 200 Amp, 4 Pole MCCB switch near meter in 16 SWG sheet cubicle box of L 7 T DH-200 25 KA (Near Meter) complete with incoming and outgoing connections.	Nos.	1			
6.3	Supplying and fixing of following rating four pole (three phase and neutral) 415 volts, residual current circuit breaker (RCCB/ELCB) complete with connections, testing and commissioning etc. as required.					
6.3.1	63 amps	Nos.	1			
6.4	Supplying, fixing, connecting, testing and commissioning of following rating, ISI marked (IS 8828) 240 / 415 volts, 10 KA, Miniature Circuit Breaker (MCB) of single / double / three / four poles in the existing MCB DB or in existing MS enclosure complete in all respects.					
6.4.1	63 Amp. FP MCB	Nos.	1			
6.5	Supply and Laying and testing of aluminium / copper conductor cable PVC / XLPE insulated armoured, served, sheathed 1100 volts grade. On surface the cable run shall be fixed by GI clamps etc. of suitable size or on existing cable tray or inside existing RCC / HDPE DWC pipe complete in all respect .The armouring of the cable shall be properly connected with the earth conductor including fixing of palm or pin type Aluminium tin plated cable socket (lug) / end terminations to the cable leads, insulating with tape and making connections with brass / nickle plated compression gland, providing cable tags complete in all respect upto the satisfaction of Engineer-in-charge.					
6.5.1	10 sqmm 4 core	Mtrs.	80			
6.5.2	16 sqmm 4 core	Mtrs.	90			
6.5.3	25 sqmm 4 core	Mtrs.	20			
7 TELEPHONE WIRING FOR VOICE						
7.1	Supply and fixing of RJ11 modular Telephone outlet in zinc chromate passivated M.S.Box and modular plate including connections atc. As required.	18	Nos.			
7.2	Providing, drawing, connecting and testing of telephone wire 0.5 sqmm tinned annealed high conductivity copper conductor with high density Polyethylene insulation, paired, polyester taped and FR PVC sheathed in existing MS/PVC conduit from telephone outlet box to the junction box/tag block as required.					
7.2.1	4 pair 0.51 sq. mm.	150	per point			
7.3	Supply & fixing the following sizes of Krone telephone tag blocks housed in suitable sizes of power coated MS boxes with hinge cover complete as required.					
7.3.1	40 pair telephone tag block	1	Nos.			
7.4	Supplying & laying the following sizes of PVC insulated or overall sheathed taped telephone cables of 0.61mm dia size inground including excavation, refilling and making good the damage etc. as required. good the same and connection etc. complete as required					
7.4.1	40 Pair telephone cable	100	RM			
8 FAN AND LIGHT FIXTURE						

8.1	a) Providing and fixing in gypsum/armstrong ceiling, connecting testing and commissioning of following luminaires including the cost of necessary inter-connections required 2'x 2' Luminare all complete.in 42 W(a) Wipro Pure LED/Phillips RC 380B LED-25-6500 PSE OD WH/GE Mapple.) equivalent models in Havells	32	Nos			
8.2	Providing and fixing in gypsum ceiling, connecting testing and commissioning of following luminaires including the cost of necessary inter-connections required. Philips BBS170I x DLED-5000 PSU WH, Low depth recessed technical, downlighter inclusive of gearbox.(Luminare all complete) (Wipro Maxi iris/Green Led/Phillips BBS 170)/Equivalent model in Havells	53	Nos			
8.3	Supplying, installation, testing and commissioning of surface mounted luminaries with required wiring, suitable for LED lamp complete of make philips LL199 1xDLED40-5000 PSE ODWH or equivalent make in wipro/havells/syska.					
	PHILIPS LL199 1xDLED40-5000 PSE ODWH	3	No.			
8.4	P/F of following Main Stream Battens (Phillips make including lamps)					
8.4.1	MIROLTA Slim (Phillips) T5 TMS540 HF. For Lamp - 1xTLS-28W	3	Nos			
8.5	P/F Philips Linea Flexible LED Strip / Tape 30W 5m 4500K (With Driver)	85	mtrs.			
8.6	Supplying, installing, testing and commissioning of wall bracket fan of 400 mm, complete with moulded propeller type blades, and accessories suitable for operation on 230 / 240 Volts, 50 Hz, single phase, A.C. supply. Cost to include p/f one no. 6 amp. switch socket on each side of the fan including 1.5 sq.mm. wiring in PVC Conduit laid in wall, ceiling, floor, etc. all complete including the cost of box. modular switch socket etc. complete up to satisfaction of the architect.	24	Nos			
8.7	Providing & fixing BELL POINTS on wall /Partition with 2x1.0 sqmm copper conductor in PVC medium gauge conduit(IS:9537) with call bell switch(Push Type) including call bell Multi Tune Bell etc. complete in DGM Cabin	2	Each			
9	DATA CABLING					
9.1	Supply & fixing the following size of PVC conduit in Floor/Surface of wall, including cutting the Floor/Wall and make the good the same as required (Data Cabling per lan point)	26	no.			
9.2	Supply & fixing flush steel box for computer data outlet dully recessed in wall complete with modular cover plate, computer outlet RJ-45 including connections etc. required.	26	Nos			
9.3	Supply and drawing of cat 6 Data cable in existing conduit complete as required per lan point .	26	no.			
10	EARTHING					
10.1	Supply and fixing of 32mm x 6mm thick copper strip insulated with PVC sleeve from existing earthing pit to proposed Distribution Boxes on 9th and 10th floor (one for body and one for complete wiring) from earth electrode including connection etc as required.	100	RM			
11	RACEWAY: including cutting of the floor and fixing as and wherever required.					
11.1	Supply, fixing, laying, hanging and embedding in wall of MS powder coated raceway top cover openable with counter sunk screws, painted stove enamelled approved colour the cover should be tight on channel with counter sunk screws to avoid entry of vermins. It should be tightened in such a way to avoid ingress of mosquito, moisture and dust. The MS Powder coated raceway / wire ways shall be complete with all accessories required such as bends, tees, reducers, offsets, cover, junction boxes etc. as reqd.					
11.1.1	Supply, laying, testing and commissioning of 100 MM wide x 2mm raceway with all requirements.	30	RM			
11.1.2	Supply, laying, testing and commissioning of 150 MM wide x 2mm raceway with all requirements.	25	RM			
12	Finger Print Biometric SYSTEM -HONEYWELL.					
12.1	Supply & Installation of Fingerprint T&A System with EMID Reader, Fingerprint storage: 3,000, Fingerprint / Password / Card / Combination verification mode to open door, Wigand In / Out / with T&A & Access Control Application	1	no.			
12.2	Supply & Installation of EM-Lock 600lbs	1	no.			
12.3	supply & Installation of Exit Push Button poll type	1	no.			
12.4	220V AC/12V DC power supply	1	no.			
12.5	12core Coaxial Cable	35	rmt.			
13	SERVER (providing fixing and commissioning)					
13.1	24 Port Cat 6, Patch Panel (make delink) for Data	1	no.			

13.2	9U Wall Mounted 2 Fan,1 PDU 6 socket 5/15,6 Hardware packet, (Dynamic make)	1	no.			
13.3	Providing & Fixing of NETWORK SWITCH with all accessories.					
13.3.1	24 way network switch 100/1000 MBPS speed	Nos.	3			
13.4	supply and fixing of cat6 patch cord D-Link for voices uses					
13.4.1	running length 3 feet	Nos.	70			
13.4.2	running length 7 feet	Nos.	70			
14	UPS SYSTEM: APC					
14.1	Battery Exide					
	Supply, installation, testing & commissioning of rating Invertors 3-phase IN, 3-phase OUT one set including battery bank, battery stands etc. all complete as per requirement of the architect.					
14.1.1	5 KVA	1	no.			
15	TELEVISION CABLE					
15.1	Providing, drawing, connecting and testing of Television cable, Electrolytic grade solid annealed high conductivity copper conductor, gas injected physical polyethylene foam insulated, wrapped with aluminium tape and aluminium alloy wire braided, jelly flooded and PVC jacketing in black colour (Compatible to DTH TV signal), in existing MS/PVC conduit from television outlet box to the junction box / splitter / subscriber or dwelling unit / Dish antenna as required. (Make : Finolex / RR / Polycab / Skytone)					
15.1.1	RG - 6	30	rmt.			
16	MAIN PANEL					
	Design, fabrication, assembling, supply, installation, testing and commissioning of Main panel suitable for 415 V, 3 phase, 50 Hz, 4 wire power supply system.					
	Panels shall be fabricated out of 2 mm thick CRCA sheet steel in cubical formation, compartmentalized in Form 3b Construction, floor mounted, free standing and shall be dust and vermin proof. 3 mm thick cable gland plate, shall be provided both at the top and the bottom of the panel.					
	125 amps MCCB & 200 AMP Bus Bar.					
	0-500 Volts digital electronic volt meter with selector switch shall be protected by 2 amps TP MCB's.					
	0- 125 Amps digital electronic ammeter with selector switch and 60/5 amps 10 VA, CL 1 CTs .					
	ON/OFF/TRIP indicating light shall be protected by 2 amps SP MCB's.					
	Bus Bars					
	1. Krypton Power Controller					
	200 amps TPN aluminium bus bars with heat shrinkable insulation sleeve.					
	2.Amptech Electric India.					
	3. Advance Controls Pvt. Ltd.					
	Outgoing					
	63 amp TPN MCB - 1 Nos.					
	40 amp DP MCB - 2 Nos.					
	63 amp DP MCB - 1 No.					
	Spare MCB's of the following					
	63 amps TPN MCB - 1 No					
	40 amps DP MCB - 1 Nos					
	All MCB shall be of 15 KA breaking capacity.					
	Main panel as described above	1	nos.			
	TOTAL OF ECTRICAL/LIGHTNING/DATA/TELEPHONE CABLING/FIRE ALARM/RACEWAY etc.					
III.O	HVAC WORKS					
1.0	Providing and fixing of interconnected refrigerant piping circuit of required sizes with imported copper tubes duly insulated with close cell elastometric foam, complete with supports and properly clamped along with Interconnected electrical wiring between room and condensing units including power cables from power supply switch/socket to condensing unit, conduit fittings etc. as required complete as per design and specifications of the manufacturer and approval/instruction of the consultant. items include chissiling of walls and finishig the same upto complete satisfaction of the architect.	160	rmt.			
2.0	Providing and fixing of PVC Drain piping-20 kg density with fittings and valves, insulated with close cell Elastometric foam complete as per design and specifications of the manufacturer and approval/instruction of the consultant items include chissiling of walls and finishig the same upto complete satisfaction of the architect. (a) 25MM	150	rmt.			

3.0	Supply,commissioning and installation of Air cooled HI-WALL MOUNTED SPLIT AC's (Make Daikin / Hitachi / Panasonic / O General) of minimum 5 star rating by BEE (HWS) complete with outdoor unit, cordless remote control, safety feature as per the design and specifications and approval/ instruction of the consultant with stand for outer unit.				
3.1	Nominal CAPACITY– 1.0 TR.	2	no.		
3.1	Nominal CAPACITY– 2.0 TR.	6	no.		
4.0	Providing ,Fixing & Installation of MS Cages for split ac condensing unit to be hanged outside, or kept on terrace with MS base frame, the cages may be grouted in the ceiling or wall as the case may be.The cages to have shuttered opening which are lockable all the cage to be painted in 2 coats of synthetic enamel after preparing base with primer coating.	8	no.		
5.0	Providing and fixing triple step 5 to 4 k.v.a automatic voltage stabilizer wall mounted of bluebird/ logitech/ micel make.	8	no.		
6.0	Providing fixing 3c x4sqmm circular wire connection complete,connection	125	rmt.		
Total Amount for HVAC Works to be carried over the summary					

TOTAL ABSTRACT OF WORKS		
S.No.	WORKS DESCRIPTION	AMOUNT (in Rs.)
	INTERIOR-FURNISHING WORKS	
	FLOORING WORK	
	MISCELLANEOUS WORKS	
	BRICK WORKS AND WINDOW WORKS	
	FURNITURE WORKS	
	STORAGES	
	SANITARY WORKS	
	ELECTRICAL/DATA/TELEPHONE CABLING/FIRE ALARM	
	AC WORKS	
	TOTAL	
	DISCOUNT (IF ANY)	
	TOTAL AMOUNT (AFTER DISCOUNT)	