

TAMIL NADU HOUSING BOARD



**SUPERINTENDING ENGINEER
(CITY/MOFUSIL)**

**NO: 493, Anna Salai,
Nandanam,
Chennai-600035,
Tamil Nadu.**

Phone No: 24331506, 24352291.

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**Name of Work : Pre-Qualification Tender –
Construction of 264 Slum Tenements
(Three Storied) at Pallipalayam,
Namakkal District. Group - III**

TAMIL NADU HOUSING BOARD

PRE- QUALIFICATION SCHEDULE

COVER – ‘A’

**NAME OF WORK : Construction of 264 Slum
Tenements (Three Storied) at
Pallipalayam, Namakkal District.
Group - III**

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**APPROXIMATE VALUE
OF WORK: Rs.430.00 LAKHS.**

EMD AMOUNT : Rs.2,25,000/-

IMPORTANT INFORMATIONS TO THE TENDERERS FOR FILLING UP OF TENDER IN THE TENDER SCHEDULE

1. The contractor are requested to read the detailed specification in Schedule A and quote the rates clearly in the tender sheet. Quoting the rates in the tender Schedule-A sheet for all the items will only be taken up for comparison and final.
2. The contractor should make sure that the rates both in figures and in words filled up in the Schedule-A.
3. The Contractors are requested to fill up the rates inclusive of all demand and tariff, neatly without over writing. Otherwise the decision of the TNHB on these rates to be taken up for comparison is the final.
4. The tenderer / Contractor will make their own arrangements to procure and use the cement and steel (as per IS Standards and its latest amendment from time to time) required for the work..
5. The cement brought and used should confirm to ISS No. 268 of 1976 and steel should confirm to IS No. 432/64 and 1786/79 (its latest amendment if any). It should be clearly understood that the rate quoted by the tenderer/contractor is inclusive the cost of 43 grade ordinary Portland cement / SRC and steel and other incidental charges such as conveyance, loading, unloading, stacking at site and testing charges etc., complete.
6. The tenderer / contractor will produce test certificate obtained from any one of the Govt. institutions for cement and steel brought to site. As and when required by the Department the cement and steel brought to the site shall be tested by the Department from any one of the approved Govt. institutions and only when the test results confirm to the ISI specification they will be allowed to be used in the works.

7. The contractors registered (the registration certificate should be re-classified and renewed upto date) under Class-1 in PWD, TNPHC, TNSCB, and other Government/Quasi Government Department with appropriate monetary limit are eligible to participate in the Tender.
8. Tenderer enclose a certificate from the concerned Department not below the rank of Superintending Engineer/Chief Executive who have executed such works within a period of five years.
9. The tenderer should have executed works of similar nature costing more than 50% of the value of the work put to tender in a single contract in Government department with in the last five years period.
10. Tenderer should be an assesses of Income Tax and attested copy of latest income tax & Sales tax clearance certificate should be enclosed along with their requisition.
11. The tenderer should enclose registration, previous performance, nature and value of the work done etc.
12. Withdrawal of Tender on any circumstance after submission will not be entertained.
13. The Tender schedule is not transferable.
14. Certificate to be furnished for not correlating any corrections in the Downloaded Tender Document Schedule.
15. The Tenderer / Contractor should be follow the above instructions without fail.
16. In case of any discrepancy between the tender documents downloaded from website and the master copy available in the office, the later will prevail and will be binding on the Tenderer. No claim on this account will be entertained.

CONTRACTOR NO. OF CORRECTIONS

SUPERINTENDING ENGINEER.

TAMIL NADU HOUSING BOARD

ANNEXURE

PAYMENT OF EMD AND SECURITY DEPOSIT PRESCRIBED ACCEPTABLE FORM

Circular No. CE / TC / 5 98 dated 10-06-98

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EMD will be accepted in the following form only and any other form for payment of EMD will not be accepted.

- 1) Cash receipt from the Division office concerned.
- 2) Demand Draft / Banker's Pay orders / Banker's cheque drawn in the name of Exe. Engineer / Tamil Nadu Housing Board of Division concerned (subject to realization of cash)
- 3) A deposit at call receipt duly pledged to the Exe. Engineer / Tamil Nadu Housing Board of concerned Divisions.

(Note item 2 and 3 shall be from Nationalized Bank / Schedule (Indian) Bank)

- 4) Government Securities / Bonds / Certificates duly endorsed / pledged in favour of the Exe. Engineer / Tamil Nadu Housing Board of Division concerned.

- 5) Indra Vikas Patras along with letter (In triplicate) stating that he / they / is / are submitting EMD in the form of IVP & by indicating name of the post office, IVP numbers and value and to mark his / their name in the back side of IVP.

- 6) NSC / KVP pledged in favour of Exe. Engineer / Tamil Nadu Housing Board Division concerned, along with the letter triplicate confirming the pledging scrips to the Exe. Engineer / Tamil Nadu Housing Board (This is not applicable to companies and Institutions)

(Note : Item 3, 4, 5 & 6 above shall be valid for 150 days from the date of opening of Tender (i.e. maturity date of above shall be on or after 150 days from the date of opening of tenders)

II. The successful tenders / Suppliers should furnish security deposit (Including EMD furnished in other forms) in the form of small saving scrips / Deposit accounts.

- 1) NSC / KVP pledged in favour of the Exe. Engineer / Tamil Nadu Housing Board Division concerned along with the letter in triplicate confirming the pledging the scrips to the Exe. Engineer / Tamil Nadu Housing Board (This is not applicable for companies / Institutions)

- 2) I.V.P. along with the letter (in Triplicate) indicating the name of the Post office IVP number and value and confirming to have been furnished the same towards Security Deposits.

- 3) Other Small Savings scrips / Deposit accounts with the compliance of the stipulation stated in (1) / (2) (as application in this case)

- 4) The Security Deposit in the Form of Irrevocable Bank Guarantee from Nationalised Bank/Scheduled Banks can also be accepted.
- III. The above are applicable to the Tenderer / firms situated in Tamil nadu only. The tenderers from other states shall remit EMD / SD by means of cash receipt from the TNHB, Division office concerned, Bankers Demand Drafts, Bankers Pay order, payable to the EE / TNHB. Division concerned. Other form of payment of EMD / SD. will not be considered in respect of the tenderers from other states.
- IV. In case of Companies / Institutions, IVP alone will be accepted towards SD, selected Small saving scrips like KVP, NSC. Time Deposit will not be accepted for EMD / SD. The companies / Institutions along with IVP, if furnished for EMD / Security Deposit shall give letter indicating the name of the post office IVP No's and its value and confirming to have been furnished by them towards EMD / S.D. for the tender / Agreement under reference.
- V. Actual purchase cost of small saving scrips will alone be taken as the amount paid by the Tenderer / Contractor. The maturity value will not be considered.
- VI. This shall form part of tender schedule / Agreement and shall supercede any other stipulations made stated elsewhere in the tender schedule / Agreement.

CONTRACTOR	NO. OF CORRECTIONS	SUPERINTENDING ENGINEER.
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TAMIL NADU HOUSING BOARD

PRE- QUALIFICATION SCHEDULE

COVER – ‘B’

**NAME OF WORK : Construction of 264 Slum
Tenements (Three Storied) at
Pallipalayam, Namakkal District.
Group - III**

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**APPROXIMATE VALUE
OF WORK: Rs.430.00 LAKHS.**

EMD AMOUNT : Rs.2,25,000/-

ADDITIONAL PARTICULARS TO BE FURNISHED BY THE TENDERER

1. Attested copy of the Registration Certificate (The Registration Certificate should be reclassified and renewed upto date in PWD / under class I in PWD / TNHB alone with appropriate monetary limit are eligible.
2. Attested Copy of Solvency Certificate issued by the Competent Authority (not below the rank of Tahsildar) issued not earlier than one year and along with E.C. in case of more than one year.
3. Command of Labour, Tools and plants, financial soundness.
4. Performance Certificate issued by the Concerned Department.
5. Credential of the Tenderer for the past five years issued by the authority not lower than the rank of Executive Engineer.
6. To produce the proof of having executed / completed works of similar nature under a single contract more than 50% of value of work put to tender in government department, with in the last five years period.
7. The balance works value in Tamil Nadu Housing Board and other Government Departments should be furnished in the affidavit and the third party certificate in each department executing authority should be enclosed for evidence.
8. The list of works in each works has been taken into account from the Board Tender Register and from other departments. The evidence should be obtained from the executing authority.
9. If any work found left from the list of Balance works in the affidavit and Board Tender Register, the tender may be liable for rejection without any correspondence.
10. Tenderer must produce a certificate from the concerned department not below the rank of Superintending Engineer/Chief Executive who have executed works within a period of five years stating that
 - i) The works awarded were completed.
 - a) within the targeted time
 - b) with E.O.T. initially granted
 - c) Beyond the E.O.T. initially granted
 - d) No. of days taken for completion beyond item "C"
 - ii) Standard materials used on works
 - iii) Whether good and skilled workmanship turned out in the execution of work
 - iv) Deployment of skilled labourer
 - v) Usage of approved materials
 - vi) Response to instructions issued by the Departmental officials.
11. The Income Tax Clearance Certificate valid on the date of opening of tender should be enclosed along with tender.
12. The current Sales Tax Clearance Certificate valid on the date of tender should be enclosed along with tender.
13. The rate tender shall be valid for a period of 90 days after the date of opening of rate tender.

CONTRACTOR

NO. OF CORRECTIONS

SUPERINTENDING ENGINEER

PRE-QUALIFICATION SCHEDULE
Schedule - I Structure and Organization

1. Name of the Company :
- Address :
- Telephone No. :
- Telex No. :
- II. Description of the Company :
(For e.g. General, Civil Engineering Contractor, Supplier of Equipment etc.,)
- III. Classification of Registration :
- IV. Name and Address of the Bankers :
- V. No. of years of Experience as a General Contractor :
- VI. Number of years of Experience as a Sub Contractor :
- VII. Name and address of Partners or Associated Companies to be involved in Project and whether parent/ Subsidiary/other :
- VIII. Name and address of Companies who will be involved in the electrical work :
- IX. Organization chart showing the structure of the company including names and positions of directors and key personnel to be attached :

Note :Particulars for Item II to VI and IX should be furnished.
separately for each partner of Joint Venture.

<u>Contractor</u>	<u>No. of corrections</u>	<u>Superintending Engineer</u>
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SCHEDULE II FINANCIAL CAPABILITY

- I. Name of the Firm :
- II. Financial Positions
- a) Cash :
 - b) Current Assets :
 - c) Current Liabilities :
 - d) Working Capital :
 - e) Net worth :
- III. Income Tax Permanent No./GIR No :
- IV. Annual Turnover as per the Income tax Act :
- a) During 03-04 :
 - b) During 04-05 :
 - c) During 05-06 :
 - d) During 06-07 :
 - e) During 07-08 :
- V. Annual Income as per Income Tax Return :
- a) During 03-04 :
 - b) During 04-05 :
 - c) During 05-06 :
 - d) During 06-07 :
 - e) During 07-08 :
- VI. Financial Resources
- a) Own Resources :
 - b) Bank Credits :

Note : Income Tax Clearance Certificate to cover Item No. IV & V and Certificate of financial soundness from Bankers are to be enclosed.

Contractor

No. of corrections

Superintending Engineer

SCHEDULE III TECHNICAL COMPETENCE

S.No.	Designation	Name	Qualification	Professional Experience and details of works carried out	Remarks
1	2	3	4	5	6

-					
		Project Manager			
		Works Manager (Civil)			
		Works Manager (Mechanical)			
		Engineer Incharge of Design office			

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Contractor**No. of corrections****Superintending Engineer**

SCHEDULE - IV MAN POWER

	With the Applicant's Pay Role	No. that could be made available for the work
1. No. of Engineering graduates	:	
2. No. of Administrative graduates	:	
3. No. of Skilled employees	:	
4. No. of Unskilled employees	:	

Contractor

No. of corrections

Superintending Engineer

SCHEDULE - V - MACHINERY

Sl. No	Name of the Equipment	No. of Units	Kind & make	Capacity	Age & conditions	Present location	Present Book value	Remarks
1	2	3	4	5	6	7	8	9

CONTRACTOR NO. OF CORRECTIONS SUPERINTENDING ENGINEER

SCHEDULE - VI –A-EXPERIENCE

Please fill in information about the works completed of the past 6 years

Sl. No	Name & location of the works	Name of the customer who awarded the work	Contract value	Scheduled time for completion	Date of commencement of work	Date of completions of work	Remarks
1	2	3	4	5	6	7	8

Note: Certificate from the customers for the completion of the respective works should be enclosed.

CONTRACTOR

NO. OF CORRECTIONS

SUPERINTENDING ENGINEER

SCHEDULE - VI –B-EXPERIENCE

Please fill in information about all the works in progress including those where the company has received a letter but a formal contract has not yet been signed.

Sl. No	Name of the works & its location	Name of the customer who awarded the work	Contract value	Scheduled date of completion	Date of commencement of work	Value completed & certified	Percentage of Physical completion	Remarks
1	2	3	4	5	6	7	8	9

Note: Copies of work orders issued in respect of works not commenced and certificate from the customers regarding the stage of completion of works in progress should be enclosed.

CONTRACTOR

NO. OF CORRECTIONS

SUPERINTENDING ENGINEER

SPECIAL CONDITION FOR PRE QUALIFICATION SCHEDULE

1. Income Tax Clearance Certificate or the Auditors report duly certified by the Chartered Accountant shall contain the information regarding the average annual turnover for 5 years shall be produced to cover of item No. IV and V of Schedule II and Certificate of financial soundness from Bankers are to be enclosed.
2. Proof of the item No. IIa and VIb, Schedule II Bankers Certificates with the latest reconciliation statement and latest Auditor's balance sheet certified by the Chartered Accountant are to be enclosed.
3. Latest Auditors report certified by a Chartered Accountant and Balance sheet indicating the present status including the unutilised bank O.D. of the tenderer and bankers certificate for the cash in Bank and O.D. facilities availed to be produced for item VI of Schedule II.
4. Proof of having the given tools and plants tenderer shall produced attested xerox copies of R.C. Book of Vehicles or Bills for the purchase of tool and plants or Auditors report certified by the Chartered Accountant shall contain information regarding the machinery for which RC Books are not issued for Schedule V.
5. Copies of work orders in respect of works not commenced and certificates from the customers regarding stage of completion of works in progress should be enclosed for Schedule
6. In respect of contractor working in Tamil Nadu Housing Board, a certificate from the concerned Executive Engineer detailing the balance works shall be enclosed. Contractor executing other department shall produce attesting xerox copy of the letter with details of balance work and balance amount given by the Chief Executive of the Department or from the authority who executed the agreement for Schedule VI B.

7. The tenderer shall produce on affidavit signature of him / them on stamp paper of Rs. 20/- indicating.

1. The balance works on hand being executing in private / public undertakings and Government Departments as on date is Rs.

2. No. of staff in the firm (Manager, Engineers and skilled workers)

3. I / We agree for debarring tendering for one year if any facts are suppressed.

8. The working capital available (Cash at Bank + Unutilized Bank Credit (OD)] + Sundry Debtors - Sundry Creditor) should be atleast 5% of the Balance work on hand of all the works under execution by Contractor plus the value of the work put to tender.

9. The tenderer should enclose the following attested copy of certificates along with pre qualification tender.

- a. Latest I.T.C. :
- b. Latest solvency certificate :
- c. Latest performance certificate
from atleast 3 officers not lower
than the Rank of E.E. :
- d. Experience certificate in the
name of tender firm / individual :
- e. Latest tools and plants :
- f. Latest balance sheet for the period of 5 years :
- g. R.C. book with latest F.C. :
- h. O.D. facilities from Bank
(Long term / short term amount) :
- i. Firms registration Certificate and
Partnership deed :

CONTRACTOR

NO. OF CORRECTIONS

SUPERINTENDING ENGINEER

**SPECIMEN COPY OF AFFIDAVIT TO BE TYPED IN NON-JUDICIAL STAMP
PAPER OF Rs. 20/- AND TO BE ATTESTED BY NOTARY PUBLIC**

AFFIDAVIT

I / We aged years
Son ofdo hereby solemnly and sincerely affirm and
declare as follows for and on behalf of the Firm.

- 1) Balance work on hand being
executed in Private/Public
undertakings and Government
Departments as on date is Rs.....
- 2) No. of Staff in our firm are as
detailed below :
 - a) Managers :
 - b) Engineers :
 - c) Diploma Holders :
 - d) Skilled workers :
- 3) No. of Current and incomplete
contract running under pre-
qualification bid :
- 4) Any of our contract was not terminated for the past five years.
- 5) If any information given is found to be concealed at a later date, the contract will be terminated
forthwith without prejudice to the rights thereon consequent on termination and the bidder will be
black listed.
- 6) I / We agree for debarring tendering for one year if any facts are suppressed.

SIGNATURE

SIGNATURE OF NOTARY PUBLIC

SEAL

FOR THE PURPOSE OF PRE-QUALIFICATION TENDERS SIMILAR WORKS MEANS

- a) For multistoreyed (construction of more than 4 floors) that is, five and above, the experience should be similar building work done with height of more than 3 meters vertically from Ground level.
- b) For works upto 4 floors, that is, four and below the experience should be for similar Building works of structure / Buildings / Houses undertaken with a minimum height of 3.5 meters above Ground Level.
- c) For work relating to drains, culverts, retaining walls, bridges, the experience should be for any of the similar civil work construction including building works of houses and flats.
- d) For road work the experience should be for formation of roads and allied development works like filling the low lying area and consolidation.
- e) For the works of water supply mains & distribution system laying of sewer lines and sewage disposal the experience should be for the similar types of work.
- f) For levelling work and filling work, the experience should be for similar levelling and filling work.
- g) For over Head Tank, the experience should be for similar type of over Head Tank work.
- h) For any other items (Tender) the experience should be for the particular similar items executed previously.

In all cases, the decision of the Superintending Engineer is final and he is competent to settle the clarification and disputes wherever necessary.

CONTRACTOR	NO. OF CORRECTIONS	SUPERINTENDING ENGINEER
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CHECK LIST FOR THE DOCUMENTS TO BE ENCLOSED ALONG WITH THE PRE-QUALIFICATION TENDER :

1. All covers are sealed with Arakku Seals (covering all joints and corners)
2. Attested copy of the Registration under appropriate class.
- 3., Attested copy of the Firms Registration
4. Attested copy of Registered Partnership Deed
5. Attested copy of the Experience Certificate for having executed work of similar nature under single contract (the work should have been completed)
6. Affidavit in Rs. 20/- Stamp paper containing the following information.
 - a. List of personnel in the firm
 - b. List of Tools and plants available
 - c. Balance works on hand
 - d. Paragraph stating that
 - i) No work was terminated under Penal clause and
 - ii) “We agree for debarring if any facts are found suppressed by us”
7. Third Party certificate for the correct value of Balance works on hand as stated in item 6(c) and duly attested and there should be no variation. If the work order is shown as balance work in 6(c), it should be clearly indicated in the covering letter that the said work has not been commenced with reasons in which case third party certificate is not necessary.
8. Attested copy of solvency certificate from Revenue Authority for the stipulated value.
9. EMD in prescribed form.
10. Attested copy of the latest Income Tax Clearance Certificate.
11. Attested copy of latest Sales Tax Clearance Certificate. If it is a new case proof of Registration is to be furnished.
12. Attested copy of latest Tools and plants certificate to be duly certified by Chartered Accountant.
13. Attested copy of latest Balance Sheet to be duly signed by Chartered Accountant.
14. Attested copy of latest Bankers Certificate indicating O.D. facility and balance amount on hand.
15. Attested copy of Quality Certificate and performance certificate separately from the S.E. / Chief Executive authority for the works executed.

CONTRACTOR NO. OF CORRECTIONS SUPERINTENDING ENGINEER

TAMIL NADU HOUSING BOARD

PRE- QUALIFICATION SCHEDULE

COVER – ‘C’

**NAME OF WORK : Construction of 264 Slum
Tenements (Three Storied) at
Pallipalayam, Namakkal District.
Group - III**

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**APPROXIMATE VALUE
OF WORK: Rs.430.00 LAKHS.**

EMD AMOUNT : Rs.2,25,000/-

**TAMIL NADU HOUSING BOARD
RE TENDER NOTICE 3-3/ 2009 - 10**

Office of the Superintending Engineer, C&M Tamil Nadu Housing Board

Tenders will be received by the Superintending Engineer, Tamil Nadu Housing Board, at his Office at Nandanam, Chennai - 35 upto **11.00 AM. On 26 .06.2009** for the work of

**Construction of 264 Slum Tenements (Three Storied) at Pallipalayam,
Namakkal District. Group - III**

1. The Tender should be in the prescribed form obtainable from Office of the Superintending Engineer, Tamil Nadu Housing Board. The tenders will be opened by the Superintending Engineer, Tamil Nadu Housing Board or his delegate at the place on the date afore mentioned. The tenderers or their agents are expected to present at the time of opening of tenders. The Tender receiving officer will on opening each tender prepare a statement of the attested and unattested corrections therein and hand it over to the tenderers concerned and initial all such corrections in the presence of the tenderer. If any of the tenderers or their agents finds it inconvenient to be present at the time, then, in such case the tender Receiving Officer will on opening the tender of the absentee tenderer make out a statement of the unattested corrections and communicate it to him. The absentee tenderer shall then accept the statement of corrections without any question whatsoever.

2. Tenders must be submitted in sealed covers and should be addressed to the Superintending Engineer, Tamil Nadu Housing Board with the name of the tenderer and the name of the work being noted on the cover.

If the tender is made by an individual it shall be signed with his full name and his address shall be given. If it is made by a member of the firm, it shall be signed with the co-partnership name by a member of the firm who shall also sign his own name, and the name address of each member of the firm shall be given. If the tender is made by a corporation, it shall be signed by duly authorised officer, who shall produce with his tender, satisfactory evidence of his authorisation. Such tendering corporations may be required before the contract is executed, to furnish evidence of its corporate existence.

3. Each tenderer must also send a certificate of Income Tax from the appropriate income tax Authority in the form prescribed therefore. This certificate will be valid for one year from the date of issue for all tenders submitted during the period.

In the case of proprietary and partnership firm it will be necessary to produce the certificate aforementioned for the proprietors and for each of the partners as the case may be.

If the tenderer is a registered contractor and if a certificate for the current year had already been produced by him during the calender year in which the tender is made it will be sufficient if particulars regarding the previous occasion on which the said certificate was produced are given.

All tenders received without certificate as aforementioned will be summarily rejected.

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4. ** Each Tenderer must pay as earnest money, a sum of **Rs.2,25,000/- /(Rupees Two Lakhs and Twenty Five Thousand Only.) in favour of Executive Engineer & Admn. Officer, Salem Housing Unit, Tamil Nadu Housing Board, Salem** enclose with this tender the challan in original. This earnest money will be refunded to the unsuccessful tenderer on application after intimation is sent of rejection of the tender or at the expiration of 150 days from the date of tender, whichever is earlier. The earnest money will not be received in cash, cheque or Bank Guarantee. Tenders accompanied by cheque, cash or bank guarantee will be summarily rejected.
5. The earnest money will be retained in the case of the successful tendering and will not carry any interest it will be dealt with as provided for in the tender.
 - * Name of work
 - ** Alternatively the earnest money deposit to the required value will be accepted in any one of these forms.
 - i) **Crossed demand draft on any nationalised banks / NSC / IVP in favour of Executive Engineer & Admn. Officer, Salem Housing Unit, Tamil Nadu Housing Board, Salem Payable at Salem.**
6. When a tender is to be accepted, the tenderer who is under consideration shall attend the office before the end of the period specified by written intimation to him. If the tenderer fails to attend the office before the end of the period specified, his tender will not be considered. He shall forthwith upon intimation being given to him of acceptance of his tender make a security deposit, it will be in formed to the successful tenderer on acceptance of tender and sign agreement in the proper departmental form for the due fulfillment of the contract. This security deposit together with the earnest money and the amount with held according to Clause 64-1 of the General Condition of the TNBP shall be retained as Security for the due fulfillment of his contract. Failure to enter into the required agreement or to the make the Security deposit as defined in this paragraph shall entail forfeiture of the earnest money. The written agreement to be entered into between the contractor and the Superintending Engineer shall be foundation of the rights of the both the parties and the contract shall not be deemed to be complete until the agreement has first been signed by the contractor and then by proper officer authorised to enter into contracts on behalf of the Housing Board.
7. The tenderer shall examine clearly the TNBP and General Condition of and sign the copy of the TNBP and its addenda volume in token of such study before submitting his tender unit rates which shall be for finished work in site. He shall also carefully study the drawings and additional specifications and all the documents which form part of the agreement to be entered into by the accepted tender. The Tamil Nadu Building Practice and other documents connected with the contract such as specifications plans descriptive specifications sheet regarding materials etc., can be seen at any time between 11.00 a.m. and 5.00 p.m. on office of the Superintending Engineer aforementioned.
 - * A copy of the set of contract documents can also be had on payment of **Rs16,875/- Inclusive of + S.T. + SC on ST (Rupees Sixteen Thousand Eight Hundred and Seventy Five only inclusive of ST + SC on ST)** for each set which will not be refunded on any account.
 1. The tenderer's attention is directed to the requirement for materials under the clause "Materials and workmanship" in the Preliminary. Materials confirming to the Indian Standards Specifications shall be used on the work and the tenderer shall quote his rates accordingly.

CONTRACTOR NO. OF CORRECTIONS SUPERINTENDING ENGINEER.

8. Every tenderer is expected, before quoting his rates to inspect the site of the proposed work. He should also inspect quarries, and satisfy himself about the quality and availability of materials. In every case the materials must comply with the relevant standard specification. Samples of materials as called for the standard specifications, or in this tender notice or as required by the Executive Engineer in any case, shall be submitted for the Executive Engineer's approval before the supply to site of work is begun.

The Tamil Nadu Housing Board will not, however, after acceptance of a contract rate pay any extra charges for load or for any other reason, in case the contractor is found later on to have misjudged the materials available. Attention of the contractor is directed to the "Preliminary Specification" regarding payment of seigniorage tools etc.

9. The Tender's particular attention is drawn to sections and clause in the Standard "Preliminary Specification" dealing with.

1. Test, Inspection and rejection of defective materials and work.
2. Carriage
3. Construction plant;
4. Water and Lighting
5. Cleaning up during progress and for delivery;
6. Accidents;
7. Delays;
8. Particulars of payment;

* To be struck out if such copies are not be issued for sale.

The contractor should closely peruse all the specification clause which govern the rate which he is tendering.

10. A Schedule of quantities accompanies this tender notice. It shall be definitely understood that the Superintending Engineer, aforementioned does not accept any responsibility for the correctness or completeness, of this schedule and that this schedule is liable to alterations by omissions, deductions or additions at the discretion of the Executive Engineer, Tamil Nadu Housing Board or as set forth in the conditions of contract. The tenderer will however base his lumpsum tender on this schedule of quantities. He should quote specific rates for each item in the Schedule and the rates should be in Rupees and Paise. The rates should be written both in words and figures and the units in words. The tenderer should also show the totals of each item and the grand total of the whole contract. The schedule "A" accompanying the lumpsum tender shall be written legibly and free from the erasures, overwritings of conversions of figures, corrections, where unavoidable should be made by crossing out, initialling dating and rewriting.

CONTRACTOR	NO., OF CORRECTIONS	SUPERINTENDING ENGINEER
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11. Tenders offering a percentage deduction from or increase on the estimate amount and those not submitted in proper form or in due time will be rejected. Rates or lumpsum amounts for items not called for shall not be included in the tender. No alteration which is made by tenderer in the contract from the conditions of contract, the drawings, specification, quantities accompanying same will be recognized and if any, such alterations are made the tender will be avoided.
12. The tenderer should work out his own rates without reference being made to the Tamil Nadu Housing Board current schedule of rates or to the estimate rates which are not open for inspection by tenderers.
13. The attention of the tenderers is directed to the contract requirements as to time of beginning work, the rate of progress and the dates for the completion of the whole work and its several parts, the following rate of progress and of proportionate value of work done from time to time. As will be indicated by the Executive Engineer's certificates of the value of work done will be required. Date of commencement of this programme will be the date on which the site (for premises) is handed over to the contractor.

Period after date of commencement	Percentage of work completed (based on contract lump-sum amount)
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I Month 10%	VI Month 60%
II Month 20%	VII Month 70%
III Month 30%	VIII Month 80%
IV Month 40%	IX Month 90%
V Month 50%	X Month 100%

Note : The period to be entered in Column (1) for the purpose of defining the rate of progress may be fixed by Executive Engineer to suit each case.

14. No parts of the contract shall be subject without written permission of the Superintending Engineer, nor shall transfer be made by power of attorney authorised to receive payment on the contractor's behalf.
15. If further necessary information is required, the Superintending Engineer of the Tamil Nadu Housing Board will furnish such but it must be clearly understood that tenders must be received in order, and according to instructions.
16. The Superintending Engineer or other sanctioning authority reserves the right to reject any tenders without assigning any reason therefore.
17. Preference in the selections from among the tenders will be given. Other things equal, to those who are themselves professionally qualified or who undertake to employ qualified men at their cost to look after the work. The tenderers should therefore state in clear terms whether they are professionally qualified or whether they undertake to employ technical staff and if so to give their professional qualifications or of the staff to be employed. In case the selected tenderer is one who has undertaken to employ technical staff under him he should see that one of the staff is always at site of the work during hours personally checking all items of work and paying extra attention to such works as may demand special attention e.g., reinforced concrete works etc.,

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18. A tenderer submitting a quotation which the tender accepting authority considers excessive and / or indicate of the insufficient knowledge of current prices or definite attempt at profiteering will tenderer himself liable to be debarred permanently from tendering or for such period as the tender accepting authority may decide.

19. The fact of submitting the tender implies that the tenderers actually inspected the site of works and have examined before tendering the nature and extend of various kinds of soil at various depth and have based their tenders on such examination by them and no future representation in this regard will be consideration.

20. A statement giving brief particulars of equipment and resources that will be put at the disposal of the work under the following classifications should accompany the tender.

- a) Equipment (Transport for materials viz., lorries and carts, concrete mixers)
- b) Organization (i) technical and (ii) unskilled.
- c) Resources in materials like teakwood, steel, etc., and extent to which departmental help is not required for procurement of materials and transport of the same.
- d) Methods that will be adopted up the work to ensure completion within or less than the time fixed for completion.

21. The Superintending Engineer, reserves to himself the right of allotting the different sub-works to different contractors or to one and the same contractor as he may decide after the receipt of tenders.

22. The Contractors are liable to pay a penalty of not exceeding one percent of the estimated value of work for non employment of the technical staff if the value exceeding Rs. 50,000/-

23. The cost of materials supplied will be recovered from the bills or any other amounts due to the contractor.

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OFFICE OF THE SUPERINTENDING ENGINEER

TAMIL NADU HOUSING BOARD

TENDER

To

The Superintending Engineer (C & M)

Nandanam

Tamil Nadu Housing Board

Date 20

Sir,

I / We, do hereby tender and, if this tender accepted, undertake to execute the following work, viz.,

**Construction of 264 Slum Tenements (Three Storied) at Pallipalayam,
Namakkal District. Group - III**

as shown in the drawings and described in the specification deposited in the Office of the Superintending Engineer, Nandanam, Tamil Nadu Housing Board, with such variations by way of alterations of additions to, and omissions from the said works and method of payment as are provided for in the conditions of contract for the sum of Rs. (in words and figures)

.....
.....

or such other sum as may be arrived at under the clause of the Standard Preliminary specification relating to "Payment of lump-sum basis or by final measurement at unit price".

I / We have also completed the price list of items of Schedule 'A' annexed (in words and figures) for which I / We agree to execute the work and receive payments on detailed final measurement at Unit Prices.

I / We hereby distinctly and expressly declare and acknowledge that, before the submission my / our tender I / We have carefully followed the instructions in the tender notice and have read the Tamil Nadu Detailed Standard Specification and the Preliminary Specifications therein and that I / We have made such examination of the contract documents and the plans, specifications and quantities and of the location where the said work is to be *done* and such investigation of the work required to be done and

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in regard to the material to be furnished as to be enable me / us to thoroughly understand the intention of the same and the requirement, covenants, agreements, stipulations and restrictions contained in the contract, and in the said plans and specification and distinctly agree that I / We will not hereafter make any claim or demand upon the Board based upon or arising out of any alleged misunderstanding or misconception, of mistake on my / our part of the said requirements, covenants, agreements, stipulations restrictions and conditions.

I / We being a registered contractor enclose an income-tax verification / have already produced and income-tax verification certificate in respect of (here particulars of the previous occasion on which the certificate was produced should be given).

I / We enclose herewith a challan for the payment of the sum of Rupees (in words and figures) as earnest money not to bear interest. If my / our tender is not accepted; this sum shall be returned to me / us on my / our application when intimation is sent to me / us of rejection or at the expiration of 150 Days from the date of this tender whichever is earlier. If my / our tender is accepted, the earnest money shall be retained by the Board as security for the due fulfillments of the contract. If upon written intimation to me / us by the Superintending Engineer indicating that my / our presence is required for the purpose of enquiry. I / We fail to attend the said office before the end of period specified on such intimation, and if upon intimation being given to me / us by the Superintending Engineer of acceptance of my / our tender. I / We fail to make the additional security deposit or to enter into the required agreement as defined in clause 4 of the tender notice. Then I / We agree to the forfeiture of earnest money. A notice required to be served on me / us hereunder shall be sufficiently served on me / us personally or forwarded to me / us by post (registered or ordinary) or left at my / our address given herein such notices shall be sent by post be deemed to have been served on me / us at the time when-in due course of post it would be delivered at the address to which it is sent.

I / We fully understand that the written agreement to be entered into between me / us and the Board shall be the foundation of the rights of both the parties and the contract shall not be deemed to be complete until the agreement has first been signed by me / us and then by the proper officer authorised to enter into contracts on behalf of the Board.

I am / We are professionally qualified and my / our Qualification are given below:

Name	Qualifications
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I / We will employ the following technical staff for supervising the work and will see that one of them is. always at site during working hours personally checking all items of works and paying extra attention to such works as require special attention (e.g) Reinforced Concrete Work.

Name of Members of technical Staff proposed to be employed	Qualifications
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- Note :
- a) The last two clauses should be scored out if the cost of the works involved is less than Rs. 10,000/-
 - b) The tenderers should score out the last clause or the penultimate according as they are themselves professionally qualified or undertake to employ technical staff under them.

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RATE OF PROGRESS

(Fill in under Notice)

Period after the Percentage of work to be
commencement of completed on the whole work

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Schedule-A

TAMIL NADU HOUSING BOARD

SCHEDULE OF APPROXIMATE QUANTITIES FOR THE WORK OF:

**Construction of 264 Slum Tenements (Three Storied) at Pallipalayam,
Namakkal District. Group - III**

The quantities here given are those upon which the lumpsum tender cost for the work is based but they are subject to alteration, omission, deduction or addition, as provided for in the conditions of the contract and do not necessarily show the actual quantities of the work to be done. The unit rates noted below are those governing payment for the extras or deductions or omissions or alterations according to the conditions of contract as set forth in the preliminary specification of the Tamil Nadu Building practice and other conditions of specifications of this contract.

It is to be expressly understood that the measured work is to be taken nett. (Not withstanding any custom of practice to the contrary) according to the actual quantities when in place and finished according to the drawings or as may be ordered from time to time by the Executive Engineer, as the cost calculated by measurement or weight at the respective prices quoted are for the work in situ and in every respects.

Contractor	No. of Corrections	Superintending Engineer
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**NAME OF WORK :- Construction of 264 Slum Tenements (Three Storied) at
Pallipalayam, Namakkal District. Group - III.**

Sl. No.	Quantity		DESCRIPTION OF WORK	TNBP No.	RATE	UNIT	AMOUNT
1	2		3		4	5	6
1			Earth work excavation for foundation in all soils and sub soils to the required depth as may be directed except in hard rock requiring blasting, inclusive of shoring, strutting and bailing out water wherever necessary, (including refilling the sides of foundation) and depositing the earth in places shown clearing and levelling the site with an initial lead of 10 metres and lift as specified hereunder etc., complete in all respects complying with standard specification.(Including Refilling)	17 23 & 24			
	1224.00	M ³	a) 0 to 2m depth.			1.00M ³ (one cubic metre)	
	282.00	M ³	b) 2 to 3 m depth			1.00M ³ (one cubic metre)	

2			Cement concrete 1:5:10 (One of sulphaate reistant cement, five of sand and ten of hard broken stone jelly) for foundation and flooring using 40 mm size broken stone jelly inclusive of shoring, strutting, baling out water wherever necessary ramming, curing etc., complete in all respect complying with relevant standard specifications and as directed by the departmental officers.	28			
	132.00	M ³	a) In Foundation upto 1.50M depth and upto basement			1.00M ³ (one cubic metre)	
	59.00	M ³	b) In foundation below 1.5 m depth and upto 4.5 m below Ground level			1.00M ³ (one cubic metre)	
3	386.00	M ³	Brick work in cement mortar 1:5 (One of sulphate resistant cement and five of sand) using chamber burnt second class ground moulded stock bricks of size 9"x 4 1/2"x 3" having minimum average crushing strength of 50Kg/sqcm in foundation & basement including dewatering wherever necessary proper setting curing etc., complete in all respects complying with relevant standard specifications.	31 & 31C		1.00M ³ (one cubic metre)	

4	1024.00	M ³	Supplying and filling in foundation and basement with Gravel in layers of 150mm thickness well watered rammed and consolidated complying with relevant standard specifications including cost of Gravel and as directed by the Departmental officers.	24 25		1.00M ³ (one cubic metre)	
5	290.00	M ³	Supplying and filling in foundation and basement with filling sand in layers of 150mm thickness well watered rammed and consolidated complying with relevant standard specifications including cost of filling sand as directed by the Departmental officers.	2425		1.00M ³ (one cubic metre)	
6			Brick work in cement mortar 1:6 (one of cement and six of sand) using Chamber burnt bricks of size 9" x 4 1/2 "x 3" having crushing strength of not less than 50 kg/cm ² for superstructure in the following floors including scaffolding and curing and the labour for fixing the door, window and ventilator frames in position etc; complete in all respects complying with relevant standard specifications.	31 31C			
	514.40	M ³	a) In Ground Floor			1.00M ³ (one cubic metre)	

	514.40	M ³	b) In First Floor			1.00M ³ (one cubic metre)	
	880.00	M ³	c) In Second Floor			1.00M ³ (one cubic metre)	
	110.00	M ³	d) In Third Floor			1.00M ³ (one cubic metre)	
7			Brick work partion walls 115mm thick using Chamber burnt bricks of size 9" x 4 1/2 "x 3" having crushing strength of not less than 50 kg/cm ² in cement mortar 1 :4(one of cement and four of sand) for superstructure in the following floor s including scaffolding and curing and the labour for fixing the door, window and ventilator frames in position etc; complete in all respects complying with relevent standard specifications.	31,31C			
	110.00	M ²	a) In Foundation & basement			1.00M ² (one Square metre)	

	737.00	M ²	b) In Ground Floor			1.00M ² (one Square metre)	
	737.00	M ²	c) In First Floor			1.00M ² (one Square metre)	
	935.00	M ²	d) Second floor			1.00M ² (one Square metre)	
8			Reinforced cement concrete 1:2:4 (one of cement, two of sand and four of hard broken stone jelly) for all reinforced cement concrete works namely tee,ell or rectangular beams, lintels, slabs, parapet com drops, staircase waist and landing slab, canopy, square, rectangularor circular column footings, fin projection, sunshade, window boxing slabs, loft and other similar works using 20mm gauge hard broken stone jelly excluding the cost of reinforcement grills, fabrication charges, shuttering and centering but including laying, vibrating, curing and finishing etc; complete complying with relevent standard specification in the following floors.	30			

	424.00	M ³	a) In Ground Floor			1.00M ³ (one cubic metre)	
	424.00	M ³	b) In First Floor			1.00M ³ (one cubic metre)	
	518.00	M ³	c) In Second Floor			1.00M ³ (one cubic metre)	
	44.60	M ³	d) In Third Floor			1.00M ³ (one cubic metre)	
9			Cement concrete 1:11/2:3 (One of sulphate resistant cement,one and half of sand and three of hard broken stone jelly)for all reinforced cement concrete works namely tee ,ell of rectangular beams,plinth beams,raft beam,canopy ,square ,rectangular or circular columns , column footing, and other similar works using 20mm guage hard broken jelly, with sulphat resistance cemnet excluding cost and fabricating of reinforcement grills shuttering and centering but including vibrating charges, laying, curing and finishing etc., all complete complying with relevant standard specifications for foundation and basement.	30			

	233.00	M ³	a) In Foundation upto 1.50M depth and upto basement			1.00M ³ (one cubic metre)	
	135.00	M ³	b) In foundation below 1.5 m depth and upto 4.5 m below Ground level			1.00M ³ (one cubic metre)	
10			Providing precast cement concrete slab for cupboards, ward robes shelves ,side slabs of boxing around window and other similar works in cement concrete 1:2:4 (one of cement, two of sand and four of hard broken stone jelly) using hard broken stone jelly of size 10 mm and less for the following thickness excluding cost and fabricating of reinforcement grills but including precasting, moulding ,curing, finishing and fixing in position with relevant standard specifications etc. complete for the following floors.(measurement will be taken including bearing in walls also).	30			
			I. 20mm thick slab.				
	374.00	M ²	a) In Ground Floor			1.00M ² (one Square metre)	

	374.00	M ²	b) In First Floor			1.00M ² (one Square metre)	
	374.00	M ²	c) In Second Floor			1.00M ² (one Square metre)	
			II. 40 mm thick slab.				
	88.00	M ²	a) In Ground Floor			1.00M ² (one Square metre)	
	88.00	M ²	b) In First Floor			1.00M ² (one Square metre)	
	88.00	M ²	c) In Second Floor			1.00M ² (one Square metre)	
11			Providing cuddappa slabs of following thickness for cupboards, wardrobes .shelves,of well polished on both sides smoothly including fixing with CM 1:3 (one of cement three of sand)12mm thick including cutting to the required size laying fixing in position and jointing with black oxide neatly etc. complete in all respects.	39A			

			I 20 mm thick slab.				
	88.00	M ²	a) In Ground Floor			1.00M ² (one Square metre)	
	88.00	M ²	b) In First Floor			1.00M ² (one Square metre)	
	88.00	M ²	c) In Second Floor			1.00M ² (one Square metre)	
12			Precaste cement concrete jally ventilator in cement concrete 1:2:4 (One of cement, two of sand, and four of hard broken stone jelly) using 20mm gauge hard broken stone jelly for the following thickness excluding the cost and fabrication of reinforcement grills but including precasting, moulding, curing, finishing and fixing in position complying with relevant standard specifications etc., complete in the following floors.	30			
			50 mm thick				
	77.00	M ²	a) In Ground Floor			1.00M ² (one Square metre)	

	77.00	M ²	b) In First Floor			1.00M ² (one Square metre)	
	77.00	M ²	c) In Second Floor			1.00M ² (one Square metre)	
13	11640.00	M ²	Providing form work for reinforced cement concrete works using M.S.sheet of size 90x60cm and BG 10 stiffened with M.S. angle of size 25mmx25mmx3mm laid over silver oak (C.W.) joist of size 10cmx6.50cm (spaced about 90cm c/c) and supported by casurina post of 10cm to 13cm dia (spaced about 75cm c/c) strutting upto 3m height and removing the same after a specified period without damaging the RCC works in all floors as directed by the departmental officers.	30S 86 86A		1.00M ² (one Square metre)	
14	308.00	M ²	Providing form work for reinforced cement concrete works using M.S.sheet of size 90x60cm and BG 10 stiffened with M.S. angle of size 25mmx25mmx3mm laid over silver oak (C.W.) joist of size 10cmx6.50cm (spaced about 90cm c/c) and supported by casurina post of 10cm to 13cm dia (spaced about 75cm c/c) strutting upto 3m height and removing the same after a specified period without damaging the RCC works in all floors as directed by the	30S 86 86A		1.00M ² (one Square metre)	

			departmental officers.(Small Quantities)				
15	3062.00	M ²	Providing Form work for soffits of reinforced cement concreteworks such as column footings, plinth beams,grade beams,bed block, columns and slabs or plain surfaces ,Staircase steps etc In Foundation and Basement which require normal struting using M.S.sheets of size 90x60 cm,BG 10 gauge of stiffened and welded with M.S.angles of size 25mmx25mmx3mm for boarding laid over country wood joists and supported by casurina props of 10 cm to 13 cm dia spaced at 75 cm centre to centre at suitable intervals and removing the same after a specified period, without damaging the RCC works in all floors complying with standard specifications and as directed.	30S 86 86A		1.00M ² (one Square metre)	
16			Fabricating , supplying and fixing of M.S. steel doors with single/ two leaves with following specifications door outer frame 40 X 40 x 6 mm angle, shutter frame 35 X 35 X 6 mm angle, M. S. sheet 20 gauge intermediate stiffener "T" Section 25 X 25 X 6 mm., pannel should be covered with 20 gauge M.S. sheet with necessary Tower Bolt 30 Cm. length, butt hinges, handle on both sides hold fast etc. complete with one coat of red oxide primer.etc all complete.				

	528.00	M ²	Door size 90 cm x 200 Cm			1.00M ² (one Square metre)	
17			Manufacturing , supplying of steel windows confirming to capital IS 1038/1983 specification with steel section used for fabrication of window/ventilator as per IS 7452/1982 specification and as per the approved type design for all size applicable for work with Iron Oxided handles with locking arrangements, peg stay and including cost for one coat of red oxided primer etc. complete and as directed by the departmental Officer. (Window/Ventilator should be weighed excluding aluminium beeding and glass panels.) The model window with grill design drawing to be seen in DB, however the window grills and design/size should be got approved by the EE before use.			1.00 Kg (One Kilogra m)	
	14630.00	Kg					

18		Supplying and fixing of PVC doors made out of PVC material conforming to IS: 10151-1982. The infill panel is made out of seamless one piece multi chambered PVC extruded sections having overall dimensions of 762 mm x 35mm with wall thickness of 1 mm + 0.2 mm with usual process variations corresponding to the Sintex code number SPUF 126. The door shutter to be reinforcement with special polymeric reinforcements shown in the drawings. The top and bottom (Hinge side if required) edges of the shutter to be covered with 'C' cap of the size 40mm x 25 mm with usual process variations. PVC tubes having overall dimensions of 32 mm x 11 mm will be provided on the hinges sides to take up necessary hardware with Door frame made out of PVC extruded section having overall dimensions of 50 x 60 mm with overall thickness 1.8 mm + 0.3 mm, with usual process variation and provided with groove for the provision of weater seal. The corners joints shall be mitre cut and welded or joined by means of plastic brackets					
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	396.00	M ²	The shutter shall be provided with 3 Nos of 4" aluminium / SS butt hinges, 2 Nos of 4" Aluminium / Stainless Steel handles, 3 Nos of 6" Aluminium / Stainless Steel tower bolts with required Stainless Steel / Aluminium screws including labour charges for fixing the shutter frame, shutter and furniture fittings in position and finished smooth with template etc., all complete as directed by the departmental officers. (Fittings provided shall bear ISI mark if available. The quality and brand of door shutter and furniture fittings should be got approved by the Executive Engineer before use).			1.00M ² (one Square metre)	
19	374.00	M ²	Supplying and fixing the of 3mm thick pinheaded/Fluted/Figured Glass panels for the windows including cost of 3mm thick pinheaded/Fluted/Figured Glass, aluminum beeding, aluminum bolts and nuts and labour charges for fixing glass panels etc, complete in all respects and as directed by the departmental officers. required for ventilators ,cost of fillets ,labour for fixing glass fillets fixed in position etc. complete complying with relevant standard specifications and as directed by the departmental officers.			1.00M ² (one Square metre)	
20	2772.00	M ²	Floor finshing Plastering with cement mortar 1:4 (One of sulphate resistant cement and four of sand) 20 mm thick finished with neat cement including, providing band cornice scaffolding	56 57		1.00M ² (one Square metre)	

			curing etc., complete complying with relevant standard specifications				
21	2816.00	M ²	Finishing top of flooring with cement concrete 1:3 (one of cement and three of blue granite chips of size 10mm and below) 20mm thick Ellis pattern flooring (No sand) and surface rendered smooth including skirting, providing proper slopes thread lining, curing etc., complete in all respects .	56 57		1.00M ² (one Square metre)	
22	145.20	M ³	Weathering course with broken brick jelly lime concrete using 20mm gauge broken brick jelly in pure slaked lime (no sand) over roof slab to the proportion of brick jelly to lime (Fat lime) being 32: 12 1/2 by volume well beaten with wooden beaters, for giving the required slope and thickness complying with relevant standard specification and as directed by the departmental officers.	44 44H 44I		1.00M ³ (one cubic metre)	
23	1870.00	M ²	Finishing the top of roof slab with one course of hydraulically pressed tile of approved superior quality of any size 23 cm x 23cm x 20mm thick laid over weathering course in cement mortar 1:3 (One of cement and three of sand) 12mm thick, mixed with water proofing compound at 2% by weight of cement used and pointed neatly with the same cement mortar mixed with water proofing compound including curing etc., complete in all respects complying with	44I		1.00M ² (one Square metre)	

			relevant standard specifications and as directed by the departmental officers. (Note: Tiles to be got approved by the EE before use).				
24	27802.00	M ²	Plastering with cement mortar 1:5 (One of cement and five of sand) 12mm thick finished with neat cement including, providing band cornice scaffolding curing etc., complete complying with relevant standard specification and as directed by the departmental officer	56 57		1.00M ² (one Square metre)	
25	6182.00	M ²	Celling'Plastering Cement mortar 1:3, (one of cement and three of sand) 10mm thick for bottom of sunshade, ceiling in all floors including scaffolding, curing, finishing, etc. complete in all respects.	56,57		1.00M ² (one Square metre)	
26	6182.00	M ²	Whitewashing three coats using clean shell lime slacked and screened including cost of lime, gum, blue brushes, scaffolding etc., complete in all respects and as directed by the departmental officers.	63		1.00M ² (one Square metre)	
27	30066.00	M ²	Painting the new walls with two coats of approved cement paint over one coat of primer such as snowcem /supercem etc., including cost of brushes, cement paints scaffolding curing etc., complete in all respects complying with relevant standard specification and as directed by the departmental officers. (The quality and shade of paint should be got approved by the Executive Engineer before use).	56 66A		1.00M ² (one Square metre)	

28	1518.00	M ²	Painting new iron work with two coats of approved Ist class synthetic enamel ready mixed paint in addition to one coat of primer of approved quality and shade. The paint should be supplied by the contractor at his own cost. (The quality and shade of paint should be got approved from EE before use on works) etc., complete in all respects, complying with relevant standard specifications.	56 56A		1.00M ² (one Square metre)	
29			Supplying, fabricating and placing in position of Mild Steel grills/ Ribbed Tor steel grills for reinforcement for all RCC works in all floors including the cost of binding wire, bending, tying, and applying one coat of cement slurry etc, complete in all respects and as directed by the departmental officers.	SS66 86A			
	241.20	M.T.	MS/RTS of all sizes			1.00MT (one Metric Tonne)	
30	440.00	Rmt.	Supplying and fixing of 110mm dia PVC SWR pipe A Type for Rain water down fall pipe conforming to IS13592 with ISI mark and fittings conforming to IS 14735 , with necessary C I gratings, shoes, bends, offsets, clamps, teak wood plugs, etc., of approved quality and including fixing C.I. gratings at the junction of parapet and floor or roof slab etc., including finishing etc., complete complying with	107		1.00Rmt (one Running metre)	

			relevant standard specifications.				
31	24.20	M ³	Brick work in cement mortar 1:4 (One of cement and four of sand) using chamber burnt second class ground moulded stock bricks of size 9" x 4 3/8" x 2 3/4" having minimum average compressive strength 50Kg/Cm2 for staircase steps including proper setting scaffolding curing etc., complete in all respect in all floors.	31 31C		1.00M ³ (one cubic metre)	
32	330.00	M ²	Providing 50 mm thick staircase parapet wall using country bricks of size 83/4"x41/4"x2" in cement mortar 1:4 (One of cement and four of sand) and plastering both sides with cement mortar 1:4 (One of cement and four of sand) 20mm thick and the hand rail portion only with red oxide plastering with cement mortar 1:4 (one of cement and four of sand) ,20 mm thick Red oxide at the rate of 9.8 kg/10 m2 providing skirting , finishing smooth etc, all complete in all respects in the all floors.			1.00M ² (one Square metre)	
			Internal water supply works:-				

33			Supplying and laying the following PVC pipes and specials suitable for plumbing by threading (as per ASTM-D-1785) schedule-40 of wall thickness not less than the specified in IS 4985 including cost of materials PVC/GI specilas GM specials like Elbow, Tee, reducess, Plug, Union, Bend, Coupler Nipple, GM gate valuve, Checkvalve, and wheel valve etc wherever required for above ground level , making grooves and holes wherever necessary in the walls, dismantling and making good of the dismantled portion with nesesary brick work and plastering painting scaffolding etc all complete as directed by the departmental officer.	97 102			
	1760.00	Rmt.	a) 32mm dia ASTM-D schedule 40 threaded Pvc pipe with necessary PVC/GI specials			1.00Rmt (one Running metre)	
	3080.00	Rmt.	b) 25mm dia ASTM-D schedule 40 threaded Pvc pipe with necessary PVC/GI specials			1.00Rmt (one Running metre)	

34	264.00	Nos.	Supply and erection of Rotational Moulded Polyethylene water storage tanks (HDPE Cylindrical vertical type) for outdoor use having capacity of 500 litres (excluding free board) of approved brand (superior variety) with ISI Mark (marked in the tank itself) with top lid with provisions of locking including necessary specials and fittings for storing potable water and manufactured with material which do not impart any taste / odour / any toxic effect and not to contaminate etc with carbon black content and dispersion in accordance with relevant I.S. specification and as directed by the departmental officers etc. complete. (The tank should be got approved from the E.E. before use)			1.00 No (Each)	
35			Supplying and fixing of the following Specials of approved quality and brand with ISI mark and as directed by the departmental officers				
	528.00	Nos.	a) 15 mm. dia. Heavy type PVC screw down tap.			1.00 No (Each)	
			Sanitary arrangements:-				
36			Supplying and laying and jointing the following dia Stone ware pipes (glazed) with spigot and sockets ends in dry conditions and tested with water, including necessary earth work excavation for trenches and refilling the same, well rammed and consolidated after the pipes are jointed with	96 99			

			cement mortar 1:1 and tarred yarn laid to proper gradient to the alignment as directed by the departmental officers(SW pipes should be got approved by the Executive Engineer before laying)				
	220.00	Rmt.	a) 100 mm. dia. S.W. pipe			1.00Rmt (one Running metre)	
	330.00	Rmt.	b) 150mm. Dia. S.W. pipe			1.00Rmt (one Running metre)	
37	88.00	Nos.	Supplying and fixing of the following the Stone ware bend and jointing with cement and tarred yarn laid to proper gradient including earth work excavation, refilling trunches, concreting, curing and testing the joint etc., complete			1.00 No (Each)	
38	88.00	Nos.	Supplying and fixing of 150mm x 100mm stone ware gully trap with iron grating over a bed of 150mm thick brick jelly concrete in CC 1:8:16 (One of cement eight of sand and sixteen of brick jelly) using 40mm size brick jelly and brick masonry chamber 115mm thick in cement mortar 1:5 (One of cement and five of sand) and plastered with cement mortar 1:3 (One of cement and three of sand) 12mm thick etc., all complete.			1.00 No (Each)	

39	264.00	Nos.	Supply and fixing of PVC Nahani Trap 75mm (Superior Variety) having minimum of water seal of 50mm confirm to relevant I.S. specifications with its latest amendments including resting on the bed of brick jelly concrete 1:5:10 (One of cement, five of sand and ten of 40 mm gauge brick jelly) etc., complete as directed by the departmental officers (The PVC Nahani Trap should be got approved from the EE before use)			1.00 No (Each)	
40	88.00	Nos.	Supplying and fixing of porcelain (Vitreous china) Orissa pattern of size 580mm x 440 mm confirming to IS 2556 (Part III) of 1981(glazing inside only) with "P" or "S" trap (white glazed at top only) with including concrete packing and filling the portion with earth, flooring the area with 75mm thick brick jelly concrete in cement Concrete 1:8:16 (One of cement eight of sand and sixteen of broken brick jelly) using 40mm gauge brick jelly and top finish with red oxide plastering with cement mortar 1 : 4, 20mm thick mixed with Red oxide at 9.8 kg per 10 Sq.m.including anti syphonic connections curing testing the joints etc. all complete. In Ground Floor	102 103		1.00 No (Each)	

41			Supplying and fixing of porcelain (Vitreous china) Orissa pattern white glazing (top surface only) if size 580 x 440mm confirming to IS 2556 (Part III) of 1981 with "P" or "S" trap filling the sunk portion with brick jelly lime concrete, proportion of brick jelly to lime being 32:12 1/2 (No sand) and flooring the area with 75mm thick brick jelly concrete in cement Concrete 1:8:16 (One of cement eight of sand and sixteen of broken brick jelly) using 40mm gauge brick jelly and top finished with Red oxide at 9.8 kg per 10 sqm. and plastering the sides of sunk portion in C.M. 1:3 (One of cement and three sand) 12mm thick mixed with water roofing compound at 2% by weight of cement used etc., including one coat of bitumen for the sides and bottom curing etc., complete for all floors other than ground floor.	102 103			1.00 No (Each)
42	176.00	Nos.	Construction of Inspection chamber Of following size with brick jelly concrete 1:8:16 (one of cement eight of sand and sixteen of broken brick jelly using 40mm gauge broken brickjelly 15cm thick for foundation and 23cm thick brick masonry in C.M. 1:5 (One of cement and five of sand) using stock bricks of size 9" x 4 1/2" x 3 " plastering with cement mortar 1:3 (One of cement and three of sand) 12mm thick on both sides top and bottom including earth work excavation RCC 1:2:4 (One of cement two of				

			sand and four of 20mm gauge hard broken stone) 5cm thick precast cover slab excluding the cost and fabrication of reinforcement grills but including benching channeling fixing cover slab in position curing finishing etc., complete in all respects.				
	44.00	Nos.	a) Inspection chamber of size 60cm x 60cm x 60 cm.			1.00 No (Each)	
	88.00	Nos.	b) Inspection chamber of size 60cm x60 cm x90cm.			1.00 No (Each)	
43			Supplying and fixing the following dia B Type PVC SWR pipe of approved quality conforming to IS 13592 & relevant specials / fittings conforming to IS 14735, including packing the joints with rubber lubricant fixing them into walls with necessary wooden plug screws, holding wherever necessary and making good of the dismantled portion with necessary connections to sanitary fittings etc., complete in all respects as directed by the departmental officers.				

	792.00	Rmt.	(a) 110mm dia PVC SWR pipe including all required PVC specials etc., all complete.			1.00Rmt (one Running metre)	
	792.00	Rmt.	(b) 75mm dia PVC SWR pipe including all required PVC specials etc., all complete.			1.00Rmt (one Running metre)	
44	638.00	Rmt.	Providing sullage drain of vent size 0.25 X 0.45 m with foundation concrete of 1:5:10(one of cement, five of sand,ten of hard broken stone) using 40 mm HBS of 15 cm. thick and 115 mm thick brick wall using chamber burnt bricks of size 9"x4 1/2"x3" in cement mortar 1 : 4 and plastered with cement mortar of 1:4 -20mm thick for bottom & 12 mm thick for sides with necessary earth work etc. complete and as directed by the departmental officers.			1.00Rmt (one Running metre)	
			Electrical Arrangements				

45			Wiring with 1.5 sqmm copper PVC insulated unsheathed single core Multi Strand Fire Retardant 1.1 KV grade copper cable with ISI Mark conforming to IS:694/1990 and with continuous earth by means of 1.5 sqmm copper insulated unsheathed single core Multi Strand Fire Retardant 1.1 KV grade copper cable with ISI Mark conforming to IS:694/1990 in fully concealed PVC rigid conduit pipe heavy duty with ISI with suitable size MS box of 16 g thick concealed and covered with 3mm thick laminated hylem sheet controlled by 5 amps flush type switch including circuit mains cost of all materials, specials etc., all complete complying with relevant standard specifications & as directed by the departmental officers..				
	264.00	Pts	a) Light point with ceiling rose.			1.00 Point (Each point)	
	792.00	Pts	b) Light point with backlite battarn holder			1.00 Point (Each point)	

46			Wiring with 1.5 sqmm copper P.V.C. insulated unsheathed single core Multi Strand Fire Retardant 1.1 KV grade copper cable with ISI Mark conforming to IS:694/1990 and with continuous earth by means of 1.5 sqmm copper PVC insulated unsheathed single core Multi Strand Fire Retardant 1.1 KV grade copper cable with ISI Mark conforming to IS:694/1990 in fully concealed PVC rigid conduit pipe heavy duty with ISI mark with suitable size MS box of 16g thick concealed and covered with 3mm thick laminated hylem sheet for Fan point controlled by 5 amps flush type switch including circuit mains, cost of all materials, specials, etc., all complete complying with relevant standard specifications & as directed by the departmental officers..			1 Point (Each point)	
	264.00	Pts					
47			Wiring with 1.5 sqmm copper P.V.C. insulated unsheathed single core 1.1.k.v. grade cable of single core multi strand fire retardent flexible copper cable with I.S.I mark confirming I.S 697/1990 with continuous earth by means of 1.5 sqmm copper PVC insulated unsheathed single core 1.1.k.v. grade cable of single core multi strand fire retardent flexible copper cable with I.S.I mark confirming I.S 697/1990 in fully concealed PVC rigid conduit pipe heavy duty with ISI mark with suitable size MS box of 16g thick concealed and covered with 3mm thick laminated hylem sheet for 5 amps 5 pin			1.00 Point (Each point)	
	264.00	Pts..					

			plug socket point at Switch Board Itself including circuit mains, cost of all materials, specials, etc., all complete				
48	2530.00	Rmt.	Run off mains with 2 wire of 2.5 Sqm. Copper PVC insulated un sheathed single core 1.1.KV grade cable with continuous earth by means of 2.5 Sqmm. Copper PVC insulated unsheathed single core 1.1 KV grade cable in fully concealed 20 mm PVC rigid conduit pipe (heavy duty) with ISI mark including cost of all materials specials etc., all complete SD No 62			1.00Rmt (one Running metre)	
49	264.00	Nos.	Supplying and fixing of water tight Bulk head fittings with guard, suitable for 100/60 watts lamp or CFL BULB Excluding cost of 100/60 watts lamp or CFL blub but including necessary connections, cost of materials etc., all complete complying with relevant standard specifications & as directed by the departmental officers...			1.00 No (Each)	
50	528.00	Nos.	Supplying and fixing of 16 amps double pole main switch metal clad(side handle) with fuse and neutral link on a suitable well varnished teak wood board including necessary interconnections and earth connections, cost of all materials etc., all complete			1.00 No (Each)	
51	220.00	Rmt.	Supplying and laying of 8 SWG G.I. wire on walls/below G.L. with necessary "U" nails earth work excavation and refilling etc., including cost of all materials all complete.			1.00Rmt (one Running metre)	

52	22.00	Nos.	Providing Earthing station using pipe electrode as per IS 3043 using 2.5m of 40mm and 1.0 m of 20mm B-class GI pipe including earth work excavation, brick work in cement mortar and plastering and cost of funnel, GI nuts, bolts, washers, check nuts, GI bend, reducer and coupling, C.I. cover of 30x30cm and including charcoal of 40 kgs and salt 10 kg etc., all complete complying with relevant standard specifications & as directed by the departmental officers.			1.00 No (Each)	
53	6600.00	Rmt.	Run off main 2 wires of 2.5 sqmm copper PVCunsheathed single core 1.1 K.v. grade cable of single core multi strand fire retardent flexible copper cable with I.S.I mark confirming I.S 697/1990 with one run of 7/20 G.I stay wire suspended with procelian reel insulators at 1.00 metre c/c for support of phase and nutural cable from top of the street pole to the house including all materials and labour charges for fixing G.I pioe abd M.S angles for three phase EB service connections.			1.00Rmt (one Running metre)	
54	264.00	Nos.	Supplying and fixing of 1 no of 375x300x20mm thick TW Plank varnished with 1 no of 16 amps 250 volts fuse unit and 1 no copper earth plate of suitable size bolts and nuts on wall for EB service connections including cost of all materials etc., all complete.			1.00 No (Each)	
55	2112.00	Rmt.	Supplying of 25 mm GI pipe B class for passing through from top of house to EB board to meet the EB requirements including necessary U rails			1.00Rmt (one Running metre)	

			clamping and redoing the dismantled portion etc;.complete.				
56	88.00	Nos.	Supplying and fixing 3 nos of 32 amps, 500 volts grade/well porcelin fuse unit on suitable teak wood plank to be fixed on top of pole/EB street pole with necessary clamps and including cost of materials etc;.complete.			1.00 No (Each)	
			TOTAL				

Note: Contractor has to sign in all the pages of Schedule-A

Contractor No. of Corrections

Superintending Engineer

TAMIL NADU HOUSING BOARD

SCHEDULE 'B'

**Name of Work : Construction of 264 Slum Tenements (Three Storied) at
Pallipalayam, Namakkal District. Group - III**

Sl.No.	Description
1	Lay out of Proposed Construction of 264 Slum Tenements (Three Storied) at Pallipalayam, Namakkal District. Group - III
2	Type Design for Slum Tenements (Three Storied at Pallipalayam)

Note: All the drawings can be seen in S.E `s Office(C&M) / Drawing Branch.

Contractor.

No.of corrections.

Superintending Engineer,

TAMIL NADU HOUSING BOARD
SCHEDULE 'C'
ADDITIONAL SPECIFICATION

1. The contractor shall make his own arrangements for clean fresh water for use on the work and shall meet all charges therefore.
2. The broken stone for concrete and RCC work shall be granite as passed by the Executive Engineer.
3. SAND & BRICK: River sand will be used in all cases. The bricks shall be stock bricks or good country bricks of fairly uniform size, shape, colour and well burnt.
4. All iron works or steel work of every kind, except such as is to be embedded in cement concrete shall immediately on arrival at the site be, properly scrapped and wire brushed and given a priming coat of lead paint without claim for extra.
5. The teakwood shall be of best Indian Teak wood only and shall be subject to inspection and approval by the Executive Engineer before use on work country wood where specified shall be best and known for scantling and uniform planks.
6. Holes and chases for electric wiring, water supply and drainage etc., shall be provided as directed during the progress of work without any claim for extra,
7. All external corners, edges of beams, edges of doors and windows openings etc. shall be finished sharp using rich mortar if necessary and also finished truly vertical or horizontal as the case may be. The rates for plastering shall include the cost of finishing as above. No extra for finishing the corners, edges of beams, etc., will be paid. The construction of the building will be deemed to be complete only if all the items of work including finishing items contemplated herein are executed. Concrete works.
8. The arrangement of M.S./RTS rods for reinforcement for each RCC works shall be in accordance with working drawings supplied.
9. The contractor has to use steel sheets over wooden frames, providing the required finish to the under side of the slab. Centering and form work shall be provided to the extent and area ordered by the Executive Engineer during the execution. The payment for centering works will be paid after the concrete is laid.
10. All cement concrete for RCC works shall be machine mixed and vibrated.
11. All lime mortar shall be ground in a mortar mill as per TNDSS (MDSS).
12. The rate for brick work in all floors includes the labour charges for fixing the frame of doors and window's and fixing G.I. Pipe outlets for windows and per sub clause 14 of TNDSS (MDD.No.31).

Contractor

No. of Corrections

Superintending Engineer

13. The rate for plastering includes providing cornice, band cornice, ceiling cornice, and skirting wherever necessary as directed by the departmental officers.

14. It is not obligatory to supply any materials (controlled or non-controlled) required for the construction, which are not available in the general stores and the contractor is expected to make; his own arrangements. The quality of these materials shall conform with, the specification given in ISI. If the material is available in the general stores, the contractor should use that materials only and the cost there of will be recovered as per the ANNEXURE. The cost of materials supplied will be recovered from the bills or any other amount due to contractor.

15. M.S. Rod, RTS Rod should be cut and placed as reinforcement with proper care according to the available rod at site, so as to ensure the minimum wastage possible.

Note: No separate charge will be paid to the contractor for straightening the M,S. Rods, RTS Rods if happens to be bend or in coils.

16. The cement brought by the contractor for use on work should be carefully stocked in approved stores and should be used on works as and when required with proper care .

17. All the dismantled portion should be made good, plastered and cement painted etc., to match original surfaces.

18. If the rates are not separately called for, for similar items of works in the works in the different floor the contractor should quote one rate applicable for all the floors indicated in the detailed plans. Any claims for such items floor wise will not be entertained under any circumstances.

19. If night work required to fulfill the agreed rate of progress, all arrangements shall be made by the contractor inclusive of lighting without any claim for extra rate.

20. Rates: The tenderer shall quote their rates for the finished items of work only as given in the schedule. It shall be clearly understood that no increase in rate tendered for will be permissible on any account.

Contractor

No. of Corrections

Superintending Engineer

21. The contractor should not employ the labour below the age of 12 years.

22. The rate for all the items shall be quoted for in the metric units.

23. The tenderer, shall examine closely the general condition of contract of the Tamilnadu Detailed Standard specification issued in the G.O. Ms. No.2659, dt.23.12.1970 and to see the copy kept in the division office in token of such study before submitting his tender. Unit rates which shall be for finished work insite.

24. The electrical works should be executed by a person or firm holding 'A' grade or 'B' grade license issued by Electrical Wireman, Supervisor, contractors, licensing Board and Government of Tamil Nadu.

25. Once the offer of the tenderer is accepted by the Board, If either the tenderers choose to withdraw this tender or for any reason refused to execute the agreement and comply with the terms of the tender and agreement, the amount deposited by the tenderer towards the EMD and A.S.D, shall be forfeited and tenderer shall not be entitled to refund the same (CE/TC/7/79) dt. 14.3.79.

26. The contractor should take risk insurance against fire, other usual risk for all or any loss or damages occasioned by or arising out of acts of God, and in particular un precedent flood, volcanic eruption . earth quake or other. convulsion of nature, invasion, the act of foreign enemies, hostilities or warlike operations (before or after declaration of war) rebellion, military or usurped power, such policy should cover the construction period against the risk by the contractor at his /their own cost and produce to the concerned Executive Engineer & Superintending Engineer within one month from the date of execution of the agreement failing which the TNHB shall be entitled to take out what ever policy as may be required to cover those eventualities and to effect recovery towards the cost of such policies from the contractor's payments with a penalty of 50% on the cost of such policiesss.

27. The consumption of lead must be in accordance with the Table, VIII of MDSS No.109. any additional consumption of lead must be intimated to Executive Engineer and Admn. Officer, who will then decided the necessity.

Contractor

No. of Corrections

Superintending Engineer

28. The pipes should not be covered until the Executive Engineer tests and approve the work. If it is covered it must be uncovered by the contractor at his own cost without claiming extra.

29. Any extension of time may not be granted by the authority, unless the delay caused is on departmental side.

30. The contractor should agree for the change of Arbitrator due to change in incumbency or due to change in territorial Jurisdiction.

- a. For Claims upto Rs.10,000/- S.E. of TNHB
- b. Rs.10,001/- to Rs.50,000/- C.E of TNHB
- c. Rs.50,001/- and above referred to the court (CE/TC/24/83, dt.7.9.83).

31. The Board would retain 50% R.M.D. recovered from the contractor for 2 years after the date of completion of work in order to enable the departmental officers to watch the effect of ail seasons of the work. After completion of two years, the contractor should produce an indemnity bond for a further period of three years. The EMD., SD and 50% of the RMD shall be released only after the expiry of six months period from the date of completion of the work (CE/TC/24/83 dt 7.9.83).

32. In case of tender at 10% less than the estimate value 1% (One) of the estimate value shall be collected in one lump sum as additional security deposit.

33. It is obligatory on the part of the contractor to effect recovery of Employees Provident fund subscription from Employees who work more than 60 days and remit to the Regional provident Fund Commissioner.

34. The contractor is bound by all the conditions of clauses of the standard preliminary specifications as amended from time to time. If in the course of the contract any G.O. is issued introducing new conditions or clauses (for PWD / other Departments) supplemental agreement must be executed by the contractor.

35. The Security deposit shall be paid by the contractor in the form of small savings scripts. The Security Deposit in the Form of Irrevocable Bank Guarantee from Nationalised Bank/Scheduled Banks can also be accepted and it has to be duly verified with the concerned Bank for genuiness.

36. Contractors special attention is invited to clause 27 and 38 of the preliminary specification on TNDSS and he is requested to provide his own expenses, shed, latrine, and urinal for his workmen.

Contractor

No. of Corrections

Superintending Engineer

37. In respect of the work being transferred from any other circles / Divisions, subdivisions, the S.E, E.E, AEE and A.E who is incharge of Circle / Division / subdivision having jurisdiction over the work shall be competent to exercise all the powers and privileges reserved in favour of the Government.

38. Water closet, basins urinals, sinks and other sanitary ware shall be of approved make as required in the relevant items. The fixing of these should be in accordance with the special specifications after the completion of the work.

39. The work shall be carried out with least hindrance of the adjoining building and the contractor shall be responsible if any damage caused to the existing fixtures, electrical fittings etc., in the course of execution and the contractor shall make good any such damages without claim for extra.

40. The clamps of G.I. pipes fittings should not be spaced more than 3'-0" apart from the wooden plug for pipe and bracket fittings should be properly fixed in C.M. 1:3 in holes made in and not hammered into the walls. The size of plugs should be not less than 1 "square at this end and at the other end with the depth of not less than 3".

41. The contractor should procure approved quality of paint only in containers. The above container should be used in the present of the Assistant Executive Engineer and got approved before use. On any account paint in other than original container will not be allowed for use.

42. The contractor shall form his own approach road to the work sites for which no extra will be due to him. On completion of work the contractor shall not be permitted to remove the materials laid for formation of road. If the contractor is allowed to use the existing roads, he shall maintain them in good condition at his own cost throughout the period of contract.

43. The work should be executed in accordance with the circular instruction of the CE issued time to time. Copy of the circular instructions can be perused in circle office during office hours.

44. Copy of latest income tax clearance certificate should be enclosed along with the tender.

45. An authenticated credential in support of experience for the similar works done so far should be enclosed.

46. EMD will be 1% upto Rs.20.00 Lakhs of estimate value plus 1/2% of the amount by which the estimates value exceeds Rs.20 Lakhs

47. Security deposit will be 2% of the contract value minus the EMD already remitted along with the tender.

Contractor

No. of Corrections

Superintending Engineer

48. Recovery under Revenue Recovery Act: - Whenever any amount has to be paid by the contractor in view of termination of the contract by virtue of clause 57.4 (TNBP) or any amount that maybe due or may become due from the contractor under these present and the contractor is not responding to the demand for the payments of the said amount, then the Government, Tamilnadu Housing Board shall be entitled to recover the said amount, as per the provisions of the Tamilnadu Revenue Recovery Act. 1964 (Tami Nadu Act. V of 1864).

49. Brick used should be of class designation 50 i.e. having a crushing strength of not less than 50 kg/cm².

50. The building materials like bricks, tiles etc., the finished products like concrete cubes etc., should be tested in recognized institution as directed by the departmental staff. The expenditure should be borne by the contractor.

51. The tenderers are requested to quote their validity of tender upto 90 days from the date of opening of the tender.

52. A levy towards the manual workers fund @ 0.3% of actual value of work done in the contract would be imposed in them which would be recovered from them as and when bills paid to the contractor Vide Memo No.(TC4/27195/9S dated 15.9.95).

53. Impounding minimum 10cm of water over roofs for 48 hours before laying the weathering course and press tiles to check the water tightness. (vide. Memo.No.TC4/68839/95 dated 24.11.95)

54. Xerox copy of the certificate for the technical personnel's to be enclosed along with the tender.

CONTRACTOR

No. of Corrections. Superintending Engineer

55. Withheld amount towards effective performance of the contract do not exceed 10% of the total value of Contract. Present rule of with-holding 5% of bill amount may be followed .

56. Payment of liquidated damages and penalty payable by the contractor in the event of non-fulfillment of any or Whole of the contract.

57. Quantity variation is permissible, to the extend of 25% with prior approval of the authority who accepted the tender provided that total value including variation is within the power of officers concerned. Otherwise, orders of higher authority shall be obtained .

58. In the Case of discrepancy between the prices quoted in words and in figures, the lower of the two shall be considered.

59. The contractors should not be allowed to use water with Saline content. The usage of water with saline content is strictly prohibited.

60. The payment of security deposit, FDR from any Nationalised Bank can also be accepted apart from whatever small savings scripts available in vogue with an understanding from the concerned Bank to release the deposit to Tamil Nadu Housing Board on request unconditionally.

61. Withdrawal of tender on any circumstances after its submission is not acceptable. The name of such of those tenderers will be removed from the list of approved contractors and their tender will not be entertained thereafter and will be summarily rejected.

62. In the event of the work being transferred to any other Unit I Division SubDivision the Exe. Engr. and Admn. Officer, the Asst. Engineer who is in-charge of the unit Division I Sub-Division having jurisdiction even the above work shall be competent authority to exercise all thsse powers and privileges of Tamiladu Housing Board and act on behalf of Tamilnadu Housing Board.

Contractor

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Superintending Engineer"

63. All the Measuring tapes used on works by Departmental officers and Contractors, Suppliers shall be graduated only in metric units and shall bear the verification Stamping of the department of Legal Metrology (on the end book) Dual Marked (Metric and feet and inches) measuring tapes should not be used by the departmental officers / Contractor; Suppliers. All the tapes should be Confirming to the Standard of weights and measures (General) Rules 1987 (Board Circular memo No. TC4/66896/98dt: 6.10.99).

64 a. The Government of Tamil Nadu by Act 15 of 1999 has introduced section 7F to the Tamilnadu General Sales Tax Act 1959 where in provisions have been introduced for 'Deduction of Tax at Sources in Works Contract' at the time of payment.

b. According to Section 7F of the TNGST Act 1959, every person responsible for paying any sum to any dealer for execution of works contract will deduct Sales Tax at source (from the dealers I Contractors) at the time of payment at the following rates.

i.Civil works contract : 2% of total amount payable to such dealers

ii.All other works contract: 4% of the total amount payable to such dealers.

The amount so deducted shall be deposited to the Assessing Authority of Commercial Tax Department with in 7 days of the amount so deducted along with a statement in the prescribed form (Form) (XXVII).

Contractor	No. of Corrections	Superintending Engineer
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65. For testing the concrete and aggregate the contractor must procure the following equipments and make them available at site.

- a. Steel mould for making 15cm cube of concrete
- b. Slump cone for testing consistency (slump test) the cone will be 30cm height truss casted cone with top and bottom diamters of 10 cm and 20cm respectively. In addition a steel rod 1.5cm dia and 50cm in length and with tamping and rounded is to be procured.
- c. For finding fineness modules and coarse aggregate hand operated Sieve Shaker apparatus may be procured along with weighing machine for weighing the aggregate and the sand.
- d. In the case of any breach of the terms of the contract the contract will be closed at the risk and the cost of contractor in addition to the forfeiture of the EMD and security deposit.
- e. The testing is to be done at the contractor's cost for all building materials and also for concrete cubes.
- f. The work shall be executed and measured as per metric dimension given in the schedule of quantities drawing etc. (F.P. units where indicated are for guidance only)
- g. Unless otherwise specified all the rates quoted by the contractor shall be for works at all levels of the buildings.
- h. Rates for every item of work to be done under this contract shall be for all lifts and leads, heights, depths, lengths and widths Except when specifically mentioned in the item, otherwise nothing extra will be paid on this account The rate for all item in which use of cement is involved is inclusive of charges for curing.

66. If at any time the Executive Engineer shall be of the opinion that the contractor is delaying commencement of the work or violating any of the progress of the site work as defined by the tabular statement rate of progress in the article of agreement, the Executive Engineer shall so advice the contractor in writing and at the same time demand complied. If the contractor neglects to comply with such demand within seven days after the receipt of such notice it shall these or at any time thereafter be lawful for the Executive Engineer to determine the contract which determination shall carry with the forfeiture of the security deposit and the total of the amount withheld from the final bill together with value of such works as may have been executed and not paid for such proportion of such total sums as shall be assessed by the Executive Engineer.

CONTRACTOR No. of Corrections. Superintending Engineer

67. Water and lighting : The contractor shall pay all fees and provide water and light as required from Municipal main or other sources and shall pay all charges therefore (including storage tanks, metre etc.) for the use of the works and workman unless otherwise arranged and decided as in writing with Executive Engineer.

The tenderer shall ensure that no damage is caused to the exiting structure / building whether it is Government owned or private owned etc. in the adjacent areas close preliminary to the proposed site and if any damage is caused due to pile driving etc. to the adjacent buildings it shall be rectified / compensated by the tenderer at his own cost of the satisfaction of departmental officers / owners of any private building affected (i.e) the contractor should indemnify the department against damages if any to adjacent building due to pile driving.

The contractor has to make his own arrangements for procuring water for construction purpose and curing should be done with water free from injurious amounts of deletion materials portable water are generally considered satisfactory for curing and mixing concrete and masonry. However the water to be used should be periodically tested at contractors cost for its suitability for using the construction work and got approved from Department Engineers.

Electricity : The contractor should make his own arrangements for obtaining electricity for all types of his use like lighting, welding, pumping and mosaic and marble polishing etc. Any damages to work resulting from rains or flame, any other cause until these work is taken over by the department after completion, will made good by the contractor at his own cost.

CONTRACTOR	No. of Corrections.	Superintending Engineer
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TAMILNADU HOUSING BOARD

SCHEDULE-C

SPECIAL CONDITION FOR "WHITE WASHING"

1. Each coat of white wash shall be laid on with a brush and allowed to dry before the next coat is applied.
2. A stroke of the brush shall be given from the top down wards another from the bottom upwards over the first stroke and similarly one stroke from the right and another from the left over the first brush before it dries. .
3. The No. of coats to be applied shall be as mentioned in the schedule.
4. The rate should be inclusive of wall cleaning, brushing and all patching must be scraped properly.
5. The old loose white wash is to be first removed and minor repairs to the plaster done, such as filling old holes etc.,
6. Each coat of white wash is to be allowed to dry and should be inspected by the subordinate incharge before applying the next coats.
7. The surface shall present a uniform white appearance without exhibiting any patching or hair cracks or streaks.
8. It is the responsibility of the contractor to clean the splashes on the wall, floor and other surfaces and articles to the satisfaction of the Executive Engineer.
9. The ladders, poles, scaffolding, etc. should be shod with bags to prevent damages or scratching of the walls and floor.

Contractor

No. of Corrections

Superintending Engineer

SCHEDULE 'D'

Applicable to all cases of works where minimum of fifty workers are employed except works relating to roads, channels and canals.

For the Provision of Health and Sanitary Arrangement for the Workers.

The contractor's special attentions is invited to clauses of TNBP and he is requested to private at his own expense the following amenities to the satisfaction of the superintending Engineer.

1. **FIRST AID** At the work site there shall be maintained in a readily accessible place, first aid appliance and medicines including an adequate supply of sterilized dressings and sterilized cotton wool. The appliances shall be kept in good order. They shall be placed under the charge of the responsible person who shall be readily available during working hours.
2.
 - a) Water of good quality fit for drinking purposes shall be provided for the work people on a scale of not less than a gallon per head per day.
 - b) Where drinking water is obtained from an intermittence public water supply, each work place shall be provided with storage tank. Where such drinking water shall be stored.
 - c) Every water supply storage shall be at a distance of not less 50 ft. from any latrine, drain or other source of pollution. Where water has to be drawn from an existing well which is within such of latrine, drain or any other source of pollution the well shall be properly chlorinated before water is drawn from it for drinking.
 - d) All such well shall be entirely closed in and is provided with a trap door which shall be dust and water proof.
 - e) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

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3. Washing and Bathing places:

Adequate washing and bathing places shall be provided, separately for men and women. Such places shall be kept in Glean and drained condition. Bathing for washing should not be allowed in or near any drinking water well.

4. Latrines and Urinals:

They shall be provided within the premises of every work places, latrines and urinals in an accessible place and the accommodation separately for each of them. shall be on the following scale as directed by the Superintending Engineer in any particular case :-

- I) Where the No. of persons employed does not exceed 50~2 seats.
- ii) Where the No. of persons employed exceed 50 but does not exceed 100.3 sets.
- iii) For every additional 100.3 slats.

Except in work places provided with water flushed latrine connected with a water bore sewage all latrines shall be provided with respectable on dry earth system which shall be cleaned atleast four times daily and atleast twice during working hours and kept in a strictly sanitary condition, The acceptance shall be tarred inside and outside atleast once a year.

The excrete from the latrine shall be disposed off at the contractor's expenses to the out way pits approved by the local public health authority. The contractor shall also employ adequate No. of scavengers and conservancy staff to keep the latrine and urinals in a clean condition.

5. SHEDS DURING REST

At the work site these shall be provided free 6f cost two suitable sheds one for male and the other for r8st for the use of laborers.

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6. At every work place at which 50 or more women workers are ordinarily employed there shall be provided two huts of suitable size for the use of children under age of 5 years belonging to such women. One hut shall be used for infants games and play and the other as their shed room The huts shall not be constructed on a lower standard than following.

- i) Thatched roofs.
- ii) Mud floors and walls.
- iii) Planks spread over the mud floor and covered with matting.

The Use of the huts shall be restricted to children, their attendants and mothers of the children.

7. CANTEENS

A cooked food canteen on a moderate scale shall be provided for the benefits of workers if it is a considered expedient.

8. SHED FOR WOMEN

The contractor should provide at his expense sheds for housing his workmen. The shed shall be on a standard not less than the cheep shelter type to live in which the work people in the locality are accustomed to a foot area of about 6' x 5' for 2 persons shall be provided the sheds are to be row with 5 ft. clear space between rows if conditions could permit. The work people shall be laid out in units of 400 persons each unit to have a clear space of 40 ft,

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TAMIL NADU HOUSING BOARD

Special Condition for Electrical Works
(To be enclosed in the Tender Schedule)

1. The work shall be carried out in accordance with the General specification for Electrical works and the code of practice for electrical wiring installation. IS. 732-1963 and I.S 3043 – 1965 and as amended upto date. All installation shall comply with the requirement of Indian Electricity Rules 1956 and Act and I.S code amended upto date.
2. Approval of the Engineer-in-charge shall be taken well in advance for all materials and brand of materials to be used on work by the contractors based on the approved brand of materials list enclosed in the tender. The choice of brand of materials from the approved list is the discretion of the Engineer in-charge and his decision will be final. The contractor is bound to use the brand of materials selected by the Engineer incharge.
3. Bad workmanship is liable to be rejected in toto.
4. The contractor shall supply on completion of work, completed plan along with insulation, polarity and earth tests reports before the installation is handed over to the Engineer – incharge in good condition in triplicate. The tests should be carried out in the presence of Engineer – in – charge at Contractor's cost.
5. All repairs and patch work shall be neatly carried out to match the original finish and to the entire satisfaction of Engineer – In charge.
6. The contractor shall make his own arrangements at his own cost for all general and special T & P required on the job.
7. The contractor shall make his own arrangements for storage, of materials and watch and ward at his own cost, till the installation (completed work) is handed over to the Department after obtaining service connection from Electricity Board and testing the line. Any loss and tampering of materials for which the payment was made by the department will be made good by the Contractor at his own cost.
8. Issue of materials to the contractor wherever stipulated will be regulated to the needs from time to time depending upon the progress.
9. Materials stipulated for issue shall be taken over to the site of work and the safe custody till completion of the job is the responsibility of the contractor.

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10. All the debris due to electrical works shall be removed from site by the Contractor as soon as the work is completed.

11. Electrical works shall be progressed by the Contractor side by side with the progress of the building work, burying of conduits for recessed portion shall be planned together with the building progress so that there is no hindrance to the building progress at any stage.

12. The internal E.I shall be ordinarily carried out according to the drawing supplied with the schedule of work subject to change made by the Engineer – in – charge.

13. The wiring route shall be marked at site first and get approval from the Engineer – in – charge before commencement of actual work. The work must be carried out as directed by Engineer – in – charge.

14. P.V.C.wiring shall be neatly painted with two coats of non cracking paint distemper suitable for painting P.V.C wire and of suitable colour to match the surroundings as per the direction of Engineer – in – charge.

15. In place where electrical conduit is required, to pass through wall RCC column / beam etc., the conduit shall be laid during the execution of work in consultation with the Engineer – in – charge So as to avoid the need for cutting the structure at a later date.

16. The teak wood materials such as fillets, specials, T.W. boxes and all materials shall be got approved from the Engineer – in – charge before use to ensure the quality of materials.

17. In the case of recessed conduit works, the M.S boxes shall also be recessed and covered with 1/8" (3mm) hylam / Bakelite sheet. The thickness of M.S.sheet shall not be less than 16 gauge thick.

18. Provision of fittings.

(a) All switch Boards shall be so placed that the bottom is normally 1.2 meter above floor level or such height as decided by the Engineer in-charge.

(b) All fittings shall be provided at 2.6 metre from the floor level or such height as decided by the Engineer in charge.

(c) The convenient 5/15 Amps plug socket shall be 23 cm above the floor level or such height as decided by the Engineer – in – charge.

(d) Wiring shall run normally at 2.6Metres above floor level or such height as decided by the Engineer in charge.

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19. The materials issued if any by the department to the contractor, the cost will be recovered at the stores issue rate. If the contractor fails to return the surplus materials after completion of work, the cost will be recovered at double the stores issue rate or market rate whichever is higher.

20. Brass hinged brass hooks and eyes, single teak wood boards of 60mm minimum depth in case of open wiring and minimum depth of 200 mm in the case of concealed wiring and not less than 6.5 mm thickness shall be used on the works.

21. Fixing of Wooden battens. (a) The screws shall be used for fixing the wooden batten and accessions at an interval not exceeding 50 cm. The thickness of patterns shall not be less than 10mm.

(b) The clips are provided on the wooden batten with screws / pins and spaced at an interval of 15 cm both in the case of horizontal and vertical run.

(c) Round block shall not be less than 75mm dia and 40 deep and fixed by means of 2 Nos screws.

22 (a). Piono type switches, sockets, outlets of approved make wherever needed shall be used for recessed boards after getting the approval of Engineer – in charge.

(b). Only brass screws shall be used for fixing, fittings, switches, plug and sockets main boards and distribution boards and teak wood accessories etc., required for the wiring.

23. All conduct pipe shall be approved gauge (not less than 16 SWG, 14 SWG) solid drawn or lap welded, finished with galvanized stone enameled finish. The saddles used shall not be less than 24 gauge upto 55mm dia. Pipes and not less than 20 gauge for longer dia pipes.

24. The main earthing lead shall not be less than 8 SWG copper (4.06 mm) in case of copper wire earthing or 6 SWG G.I wire (493) in case of G.I wire earthing separate earthing shall be provided for all mountings of main boards, distribution boards, 5/15 amps. plug sockets with not less than 14 SWG of copper (2.03 mm)

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25 Earthing shall conform to the relevant I S code, 3043 - 1966 the G I pipe earth electrode system is, adopted G 1 pipe shall be of medium class 38- 40 mm dia., 3.75 meters long. The electrode shall be buried in the ground vertically With its top not less than 20 cm. below ground level Normally an earth electrode shall provide 1.5 meters away from any building, In case of providing twin earthing the distance between the earth pits shall be 10 feet Alternate layers of charcoal or coke and salt of minimum 15,cm. thick are to be provided from the bottom of earth pit upto 1 meter below ground level and the masonry work, is to be carried out in brick with the cement mortar 1:4 above the last layer and the top is to be covered with suitable cast iron frame and cover.

26'. The staircase light point wiring must be done by looping or piece wire system and switch must control phase or live wire only.

30. Looping in system is to be adopted for wiring Normally the looping of neutral to light, fan, plug, points etc. should be restricted to 3 points for a single wire from the switch board

27. The wooden batten and specials shall not be butt jointed and joints should be lap jointed.

28. The wiring must be done using bend and corners wherever necessary. Sharp bending or cable must be avoided.

29. The lighting circuit shall not have more than 10 points or a load of 800 watts. whichever is less

30. Power wiring shall be kept separate and distinct from the lighting wiring.

31. The contractor should be present at the premises at the time of effecting service connection by the Electricity Board authority and afford all facility for testing and commissioning the installation.

32 The contractor should provide sufficient leads for connecting the main switches to meters and cut outs provided by the Electricity Board at his own cost.

33. The apartment main switches and the main switches at the Electricity Board service connection boards should be numbered in paint for easy identification and the danger boards should be provided wherever necessary according to I. E. Rules and Act regulations

34. Looping of neutral and connection wires in the switch boards must be carried out through mechanical connections and proper insulation shall be provided inside the switch wherever necessary to avoid short circuiting the system.

35 The scaffolding and the shed required for the electrical installation works should be put by the contractor at his own cost.

36. The Run off mains relates to the mains, run from the main switch inside the apartment to the mains switch provided for service connection by the Electricity Board authorities. The distribution box used shall be metallic enclosed type with fuse unit and natural link. The earthing for the main switches provided in the service connection Board should be properly interconnected and connected to the main earthing system.

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LIST OF HOUSE HOLD ELECTRICAL APPLIANCES

Circular No. / TC4 I 193 I 89 dt. 06-01-1989

<u>Sl. No.</u>	<u>House hold Electric & Electronics</u>	<u>Standard</u>
1.	Electric immersion water heater	IS: 368-1983
2.	Storage type automatic electric water heater	IS:2082-1985
3.	Switches for domestic & similar purposes	IS I 3854-196V
4.	Rubber insulated cables (with copper conductor (voltage Upto 1 I 1 KKV.)	IS: 9968 (Part I) 1981
5.	Rubber insulated cables (with aluminum conductor Upto 1 : 1 K.V)	IS: 9968 (Part 11) 1981 (Voltage
6.	PVC insulated cables (for voltage upto upth 11 OOV)	IS: 694.1977
7.	PoJythylene insulated and PVC sheathed cables upto and including 1100 Voltage	IS : 1996-1997
8.	Electrical Irons	IS 1336.1985
9.	Electric Stoves	IS: 2994-1965
10.	Electric Hot plates	IS:1365-1983
11.	Domestic Electric food mixers (Liquidizers Blenders & Grinders)	IS : 4250-1980
12.	Electric Toasters	IS : 1287 -1965
13.	Electric Coffee percolaters (Non regulator type)	IS: 3514.1966
14.	Pomeatic Electric Cloths washing machines (Non. regulator type)	IS : 6390-1983
15.	Ele. Kettles and jugs for house and similar type	IS : 367-1983
16.	Electric Radiators	IS : 369-1983
17.	Electric Water boilers	IS : 3412-1985
18.	MAIN-operated electric shavers	IS : 71541973
19.	MAIN operated electric shavers	IS : 5152-1969
20.	Domestic electric cooking ovens	IS: 5790-1985
21.	Steam Irons	IS : 6290-1971
22.	Electric. Electronic hearing gads domestic use	IS: 5161-1969
23.	Portable hand-held mains operated electric massagers	IS: 7137-1973

(Contd. PTO)

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<u>Sl. No.</u>	<u>House hold Electric & Electronics</u>	<u>Standard</u>
24.	Portable low speed food grinding machine	IS : 7603.1975
25.	Appliance connectors and appliance Inlets (Non-revertable three pin type) appliance	IS : 3010 (part-1)1965
26.	Appliance connector and appliance inlets (Non reversible three pin type) appliance inlets	IS : 3010 (Part-II) 1965
27.	Thermostats for use with electric water heater	IS : 3017-1985
28.	Cartidge type heating elements water heater (Non embedded type)	IS : 3724-1966
29.	Resistances wire. tapes and strips for heating elements	IS : 3725.1966
30.	Solid embedded type electric heating elements	IS : 4158 -1985
31.	Mineral filled sheathed heating elements	IS : 4159.1983
32.	Thermostats for general electric ovens	IS : 4165-1967
33.	MICA insulated heating elements	IS : 6446 1972
34.	2 Amps switches for domestic and similar purposes	IS : 4949-1968
35.	Electric portable lamp stands and brackets	IS : 3481-1966
36.	Three pin plugs & sockets-outlets (First revision)	IS 1293-1967
37.	Three pin plugs made of resilients materials	IS: 6538-1971
38.	Bayonet Lamp Holders	IS:: 1258-1979
39.	Electric Instantaneous water heaters	IS : 8978-1985
40.	Single walled baking oven	IS I 8925-

Contractor**No. of Corrections****Superintending Engineer.**

**ADDITIONAL SPECIFICATIONS FOR QUALITY OF MATERIALS AND TESTS TO
BE CONDUCTED**

S.No.	Material to be tested	Sampling	Name of test	Permissible limits	Standards.
1.	Water	Local Source: Lab Test once in 3 month.	Total Alkalinity	250 mg/I	IS 456-1978
		Out Source: Lab Test once in a month	Total Dissolved Solids	3000 mg/I	IS 456-1978
		Lorry Load: Field Test – Litmus paper test for every load	Sulphates (SO ₄)	400mg/I	IS 456-2000 Clause 5.4
			Chlorides (Cl)	2000 mg/I for concrete not containing embedded steel and 500 mg /I for reinforced concrete work	IS 456-2000 Clause 5.4
			Suspended Matter	2000 mg/I	IS 456-2000 Clause 5.4
			pH Value	Not less than 6	IS 456-2000
2.	Cement (43 Grade)	One test for every 300 Ton of Single Brand – test to be done if there is change in Brand.	Initial Setting time	Not less than 30 minutes.	IS 8112-1976
			Final setting time	Not more than 600 minutes	IS 8112-1976
			Fineness of Cement	2250 sq.cm/gm	IS 8112-1976
			Soundness of Cement	Expansion not more than 10mm	IS 8112-1976
			Compressive strength of CM 1:3 cube		IS 8112-1976
			3 days (72+/-1 hr)	Not less than 230 kg / cm ²	
			7 days (168+/-2 hr)	Not less than 330 kg / cm ²	
			28 days (672 + /-4 hr)	Not less than 430 kg/cm ²	
3.	Steel (Deformed Bars (fe.415))	Every load and each diameter	Tensile Strength	15% more than the measured yield stress	IS 1786-1985.

			Minimum yield stress	42.5 / kg / Sq.mm	IS 1786-1985
			Minimum percentage elongation	14.5	IS 1786-1985
4.	Sand	Every Load	Clay, fine silt and the dust	Not more than 5% of mass	IS 2116-1980
5.	Coarse Aggregate	Every Quarry	Crushing value of Alternatively	Not more than 45%	IS 383-1970
			Impact Value	Not more than 50%	IS 383-1970
6.	Bricks	Lot Size – more than 1 Lakh bricks – number of Samples 20 Nos	Compressive Strength.		IS 1077-1986
			For Class 35	Not less than 35 Kg / cm ²	
			For Class 50	Not less than 50 Kg / cm ²	
			Water absorption	The average water absorption of bricks shall not be more than 20% of weight	IS 1077-1986
			Efflorescence	the rating of efflorescence shall not be more than moderate	IS 1077-1986

S.No .	Material to be tested	Sampling	Name of test	Permissible limits	Standards.
7.	Hydraulic Pressed tiles	One test for an area upto 1999 Sq.m and one additional test for every 1000 sq.m and part thereof.	Water absorption	Shall not exceed 15%	Part I of IS 2690 – 1993.
			Flextural strength	Shall not be less than 15 Kg / Cm ²	IS 2690-1993
8.	Mosaic Tiles	One test for an area upto 1999 sq.m and one	Water absorption	Shall not be exceed 10%	IS 1237 –

		additional test for every 1000 sq.m and part thereof.			1980.
			Transverse strength	Shall not be less than 30 Kg/cm ²	IS 1237 – 1980
			Wear: Ave: Wear	Shall not be more than 3.5mm	IS 1237-1980
			Wear on individual Specimen	Shall not be more than 4mm	IS 1237-1980
9.	Electric Cable	One test for each brand	Conductor Resistance at 20 ⁰ C		IS 664-1990
			For 1.5sq.mm cable For 2.5sq.mm cable For 4.0sq.mm cable	max.allowable limit 12.10ohm/km max.allowable limit 7.40ohm/km max.allowable limit 4.95ohm/km	
10.	Wood	One sample for each work	Lab Test – Moisture Test	Not more than 12%	
			Field Test – Visual Observation	Free from rotten, unsound Knots (or) Knots incluster	IS 3629/1966
11.	Cube test in Lab		Compressive Strength		IS 456 – 2000
		1m ³ to 5 m ³ – 1 Set	M 15 (1:2:4)		
		6m ³ to 15 m ³ – 2 Sets	28 days	not less than 150 kg / cm ²	
		16m ³ to 30 m ³ – 3 Sets	7 days	not less than 100 kg / cm ²	
		31m ³ to 50 m ³ – 4 Sets			
		> 50 m ³ – 4 plus one for each	M 20 (1:1.5:3)		

		addl.50 m ³			
			28 days	not less than 200 kg / cm ²	
			7 days	not less than 135 kg / cm ²	
12.		Type work	With Vibration	Without Vibration	
	Slump Test at site (Slump in cm)	Mass concrete, large section, roads and pavements	1.0 to 2.5	5.0 to 7.5	
		RCC foundation, substructures, thick walls & other heavy sections	2.6 to 5.0	4.0 to 11.5	
		Thin vertical sections Such as walls, beams, columns with congested reinforcement	4.0 to 5.0	10.0 to 17.5	
		When using concrete pump	8.0 to 10.0		

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TAMILNADU HOUSING BOARD

7. TYPES OF EARTH ELECTRODES:

7.1. Rod and pipe Electrodes (Fig.4)

- 7.1.1 These electrodes shall be made off metal rod or pipe having a clean surface not covered by paint enamel or poorly conducting materials.
- 7.1.2 Rod Electrodes of steel or galvanized iron shall be at least 16mm in diameter and those of copper shall be at least 12.5mm in diameter.
- 7.1.3 Pipe electrodes shall not be smaller than 30mm internal diameter if made of galvanized Iron or steel and 100mm internal diameter if made of cast iron.
- 7.1.4 Electrodes shall, as far as practicable be embedded below permanent moisture level.
- 7.1.5 The length of rod and pipe electrodes shall not be less than 2.5m.
- 7.1.6 Except where rock is encountered rod pipes and rods shall be driven to a depth of at least 2.5m where rock is encountered at a depth of less than 2.5m the electrodes may be buried inclined to the vertical. In this case too the electrodes shall be at least 2.5m and inclination not more than 3.0m from the vertical.
- 7.1.7 Deeply driven pipes and rods are, however, effective where the soil resistivity decreases with depth or where substratum of low resistivity occurs at depth greater than those to which rods and pipes are normally driven.
- 7.1.8 Pipes or rods, as far as possible, shall be of one piece.
- 7.1.9. For deeply driven rods, joints between sections shall be made by means of a screwed coupling which should not be of greater diameter than that of the rods which it connects together.
- 7.1.10. To reduce depth of burial of an electrode without increasing the resistance, a number of rods or pipe shall be connected together in parallel. The resistance in this case is practically proportional to the reciprocal of the number of electrodes used so long as each is situated outside the resistance area of the other (See fig.5). The distances between two electrodes in such a case shall be not less than twice the length of the electrodes.
- 7.1.11 If necessary rod electrodes shall have a galvanized iron water pipe buried in the ground adjacent and parallel to electrode itself. It's one and shall be at least 5cm above the surfaces of the grounds and need not be more than 10cm. The diameter of the pipe shall be between 5cm and 10cm. The difference between the lengths of the electrode and that of the pipe if under the earth's surface not be more than 30cm and in no case shall the length of the pipe exceed that of the electrode.

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TAMILNADU HOUSING BOARD
CONDITIONS FOR TRAINING OF APPRENTICES AS PER APPRENTICES ACT

The contractor shall comply with the provision of the Apprentices Act 1961 and the rules and orders issued there under from time to time. If he fails to do so his failure will be a breach of contract and the competent authority may at his discretion cancel the contractor or invoke any of the parties of breach of contract provided in the agreement. The contractor shall also be liable for any precautionary liability arising of account of any violation by his of the provision of the Act.

2) Contractor shall during the currency of the contract ensure engagement of the Apprentices in the categories mentioned below who may be assigned to him by Director of Employment and Training State Apprenticeship Adviser, Tamilnadu. The Contractor shall train time as required under the Apprentices Act 1961 ad the rules made there under and shall be responsible for all obligations of the employer under the said item including the liability to take payment to the apprentices as required under the said Act.

Value of Contract	Category	To be appointed
1. Above Rs.1.00 lakhs to Rs.3.00 lakhs	1. Building contractor	1
	2. Brick layer	2
2. Above Rs.3.00 lakhs to Rs.10.00 lakhs	1. Building contractor	1
	2. Brick layer	1
	3. Diploma holder in Civil	1
3. Above Rs.10.00 lakhs	1. Building contractor	1
	2. Brick layer	1
	3. Engineering Degree holder in Civil	1

3) Unless the contractor has been exempted from the engagement of Apprentices by the Director of employment of training/State Apprenticeship Adviser, a certificate to the effect that the contractor has discharged his obligation under the said Act satisfactory should be obtained from the director of Employment and Training/State Apprenticeship Adviser and the same should be provided by the Contractor, final payment in the settlement of the contract.

(Authority: G.O.M.s.No.866/Transport Department dated 12.8.70)

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TAMIL NADU HOUSING BOARD

TECHNICALLY QUALIFIED MEN SHOULD BE EMPLOYED AS FOLLOWS:-

Sl.No.	Value of contract	Qualification and No. of Technical Assistants to be employed
1.	2.	3.
1.	Up to Rs.1 lakh	No technical Assistants need to be employed, However, if the Officer who accept the agreement feels that the nature of work requires a Technical Assistants, conditions may be stipulated in the tender notice that diploma holder in civil engineering or a retired Junior engineer may be employed.
2.	Upto 1 Lakh to Rs.3/- lakhs	One Diploma holder in Civil Engineering or not less than one retired Junior Engineer.
3.	Rs.3/- lakhs to Rs.10/- lakhs	One B.E. (Civil) or equivalent degree holder or not less than one retired sub-divisional officer (Assistant executive Engineer or Assistant divisional Engineer).
4.	Rs.10 lakhs to	One E.E. (Civil) or equivalent degree holder with three years experience in Civil Engineering works or not less than one retired sub divisional officer plus one diploma holder in Civil Engineer.
5.	Rs.25/- lakhs to Rs.50 lakhs	One E.E. (Civil) or equivalent degree holder with thee years experience or not less than one retired sub-divisional officer (Retired Assistant Executive Engineer plus two Diploma holder in Civil or two retired Junior Engineers)
		<u>ALTERNATIVE:</u> One B.E. (Civil) or equivalent degree holder with three years experience or not less than one retired sub-divisional officer and one more B.E. (Civil) or equivalent degree holder).
6.	Above Rs.50/- lakhs	To be examined in individual class depending on the nature of work and the technical skill involved and defined in the Tender Notice regarding the number of qualified technical personnel to be employed by the contractor.
	2.	Penalty of Rs.500/0 p.m. for Diploma holder and rs.1000/- p.m. for degree holder be levied in case of default on the part of contractors in following the norms laid down above.

1	2	3
	3	The employment of Technical Assistant could be based only on the value of contracts. Engineer with Mechanical Engineering qualification and retired from Civil engg. Department are also suitable to supervise the Civil Engineering work because of their experience in Civil engineering field.
	NOTE	In case the contractor who is professionally qualified is not in a position to remain always at the site of the work during working hours personally checking all items of work and paying extra attention to such works as may demand special attention (e.g) R.C. work etc., he should employ technically qualified men (as prescribed for the work).
I am / we are professionally qualified and my / our qualification are given below:		

--

NAME	QUALIFICATION
I / we will employ the following technical staff for supervising the work and will see that one of them is always at site during working hours personally checking all items of work and paying extra attention to words as required special attention (e.g.) reinforce concrete work.	
Name of members of technical staff proposed to be employed	QUALIFICATIONS

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In deciding the period of absence, the certificate from the Assistant Engineer in charge of the work counter signed by the Executive Engineer in charge shall be taken as the conclusive evidence and I / We shall be bound by such a certificate.

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SPECIAL CONDITIONS FOR SENDING THE CEMENT CONCRETE CUBES FOR TESTING

The contractor should make arrangements for getting mould to the site for casting of cubes for testing of concrete strength.

1. Mould: The concrete mould' should be as per IS Specification (IS-516-1959) the details of which are as follows:

The mould shall be of metal, preferably steel or cast iron, and stout enough to prevent distortion. It shall be constructed in such a manner as to facilitate the removal of the moulded specimen without damage and shall be so machined that when it is assembled ready for use, the dimensions and internal faces shall be accurate within following limits.

The height of the mould and the distance between opposite faces shall be the specified size + 0.2mm. The angle between adjacent internal faces and top and bottom planes of the mould shall be 90. + 0.50. The interior faces of the mould shall be plane surface with a permissible variation of 0.03 mm. Each mould shall be provided with a metal base plate having a plane surface and to support the mould during the filling without leakage and it shall be preferably attached to the mould by springs for screws.

The interior surfaces of the mould shall be thinly coated with mould oil to prevent adhesion of the concrete.

2. **Compacting: The concrete shall be filled into the mould in layers approximately 5 cm. deep. each layer shall be compacted either by hand or by vibration as described below(as per ISI).**
When compacting by hand, the standard tamping bar shall be used and the stokes of the bar shall be distributed in uniform manner over the cross section of the mould as prescribed in I.S.I. and for cubical specimen in no case, shall be concrete be subjected to less than 35 strokes per layer for 15 cm cubes (as per I.S.I.).
When compacting by Vibration each layer shall be vibrated by means of an electric or pneumatic hammer of vibrator (as Per I.S.I).
3. **The concrete cubes shall be cured for 28 days and send on 29th day. if the day falls on a holiday the cubes shall be sent on the next working day.**
4. **All the charges connected with the cube testing etc. shall be borne by the contractor.**
5. **If the concrete cube is found to be of lesser strength then reduction in agreement rates shall be adopted as per the powers delegated to Executive Engineers.**
6. **For working out the reduction of rates the following procedures will be adopted. When the strength of cubes tested is between 75% and 100% of the specified strength the agreement rates should be reduced proportionately to the allowable strength of concrete .**
7. **When the strength of cube tested falls below 75% of the allowable strength, the R.C. Component from where the cube samples are collected shall be rejected. However as an additional check, non-destructive test will be conducted through**

recognised institutions like Anna University etc., whether the concrete component can be rejected or reduced rate to be adopted will then be decided. However for working out the reduced rate, the cubes strength value only should be taken and worked out as given in par (6) above.

CONTRACTOR	NO.OF CORRECTIONS	SUPERINTENDING ENGINEER
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TAMIL NADU HOUSING BOARD

List of Electrical Materials and Sanitary fittings & PVC Doors and Windows of approved Brand to be used in TNHB works

Sl.No.	Name of Materials	Company Name	IS No.
<u>Electrical Items</u>			
1	PVC Sheathed / Unsheathed Copper Cable 1100 V	FINOLEX, KUNDAN, ANCHOR, Q-FLEX, HAVELLS, JAIMAX GOLD, RALLISON WITH ISI MARK.	IS 694:1990
2	Flush type switches, plug sockets power plug sockets staircase switches, Bell push switches and Ceiling rose, batten holder, etc.	RECORD, ANCHOR (ROMA MODULAR RANGE OF SWITCHES), LEADER, FINOLEX, KUNDAN .	IS 3854:1988
3	Double / Triple pole Main, Switches.	STANDARD, HAVELLS, ZETA, HPL, GEM, L&T, BCH SIEMENS, SPUTNIK WITH ISI MARK	
4	Distribution Boards (Rewireable type)	MDS,JEM, HAVELIS, ZETA HPL, SPUTNIK WITH ISI MARK.	
5	Consumer unit with rewriteable Main switch and distribution fuse units for use in inside apartment other complexes.	MDS,ZETA, STANDARD & HAVELLS	
6	a)Miniature Circuit Breaket IS:12640-1(2000)	MDS, INDO-KOPP, HAVELLS, STANDARD, FINOLEX, BENTEC, INDO ASIAN.	IS:12640-1(2000) IS 8828-1996
	b) Miniature circuit breaket Distribution Board		
	c) Consumer unit with MCB Isolator for incoming and miniature circuit.Breaker for distribution circuit for inside complexes.		IS 13032-1991
7	Bulkhead fittings	K-LITE, MUNDRA, FLOUROCRAFT, GLOLITE, BAJAJ, PHILIPS & CROMPTON GREAVES.	
8	PVC Electrical conduct Heavy gauge : Pipe	AVON PLAST (WITH ISI MARK) MERCURY	
9	Hylem Sheet	3MM THICK WITH LAMINATION	

10	Light fittings	PHILIPS, BAJAJ, FINOLEX, ANCHOR, CROMPTON GREAVES, HMT, MYSORE LAMP, FIXOLITE WITH ISI MARK.	
11	L.T armoured UG gables	UNIVERSAL, CCA, UNIFLEX, PARAGON, ANCHOR & FINOLEX.	
12	Ceiling Fan	USHA, CROMPTON, ORIENT, ALMONARD, KHAITHAN, POLAR, RALLY & KEDIA	
13	FSUs for cubical/industrial type panel boards	Siemens/GE/L&T & Standard	

Sanitary Pipes :

1	<u>PVC Rigid Pipes for water supply</u> Size and Range: 20mm to 200mm & 2.5 kg to 10 kg pressure	FINOLEX, SUPREME, TRUE BORE, FLOW GUARD & PRINCE.	IS 4985																																																						
	<u>Heavy presure Solvent Cemented Pipes</u> <table><tr><td>Size</td><td>OD</td><td colspan="2">Wall thickness</td></tr><tr><td></td><td></td><td>Min</td><td>Max</td></tr><tr><td>20</td><td>20.30</td><td>2.80</td><td>3.30</td></tr><tr><td>25</td><td>25.30</td><td>2.90</td><td>3.40</td></tr><tr><td>32</td><td>32.30</td><td>3.40</td><td>3.90</td></tr><tr><td>40</td><td>40.30</td><td>3.60</td><td>4.20</td></tr><tr><td>50</td><td>50.30</td><td>3.70</td><td>4.30</td></tr></table>	Size	OD	Wall thickness				Min	Max	20	20.30	2.80	3.30	25	25.30	2.90	3.40	32	32.30	3.40	3.90	40	40.30	3.60	4.20	50	50.30	3.70	4.30	FINOLEX, SUPREME, TRUE BORE, FLOW GUARD & PRINCE.	IS 4985																										
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2	PVC Fittings	SUPREME, FLOW GUARD, FINOLEX & PRINCE	IS 7834 (Part 3)																																																						
3	UPVC Soil, Waste and Rain Water (SWR) Drainage System	SUPREME, PARAS, FINOLEX & PRINCE.	IS 13592 -1992																																																						

	Nominal Thick outside B diameter <u>Max</u> 50 3.80 75 3.80 90 3.80 110 3.80 4.00	Tolerance on outside diameter +0.30 +0.30 +0.30 +0.40 160 4.60	Wall Thick Type-A Min 1.80 1.80 1.90 2.20 +0.50	Wall Type- Max 2.20 2.20 2.30 2.70 3.20 3.80	Note :As per IS 13592-1992 Type A Pipes are recommended for use in ventilation pipe work and rain water application and Type B pipes are recommended for use in soil and waste discharge system.	
<u>Bath Room Fittings :</u>						
1	Hot & Cold water CPVC pipes& Fittings			FLOW GUARD,SUPREME(Life line), ESSCO, JAGUAR sanitary bath room fittings & Accessories,FINOLEX, PRINCE MARVEL & PARSELANO		ASTM D-2846
2	Water Storage Tanks (PVC)			SINTEX, LOTUS,INFRA.		IS 12701:1996
3	UPVC Doors & Windows			SINTEX, POLYWOOD		
4	Aluminium Doors & Window fittings			CROWN, CLASSIC WITH ISI mark		
5	G.P.C. Steel windows			NCL ALLTEK & SECCOLOR LTD.		
6	Floor & Wall Tiles.			JOHNSON, MARBITO & KHAJARIA		
7	Painting works (First Class) with brand Name			(Dulux- I.C.I), (Luxol Hi-Gloss-Berger Paints), (Apolite- Asian Paints), (Nerolac- Good Lass)		
8	Steel Rods - with TMT ISI Mark			TATA, SURANA, PULKIT, SISTRONG		IS-1786 (1985)

CONTRACTOR NO.OF CORRECTIONS SUPERINTENDING ENGINEER