



# Madurai Corporation

## Tender Document

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# Madurai Corporation

## Section – I

### Notice Inviting Tenders

<b>Tender No.</b>	<b>: E 6 / Est. No. 690 / 21-22 (5th Call)</b>
<b>Name of the Work</b>	<b>: Construction of Urban Health Wellness Centre (UHC) Balarengapuram UPHC Location at East Madurai Station Road in ward -44 (Old Ward No – 71)</b>
<b>Tender put value</b>	<b>: Rs.24,12,000/-</b>
<b>E.M.D.</b>	<b>: Rs.24,120/-</b>
<b>Date &amp; Time of Opening</b>	<b>: 26.05.2022, 3.30P.M.</b>

For and on behalf of Corporation council sealed tenders are invited in the form prescribed for the work mentioned above and will be received by the Commissioner, Madurai Corporation up to **26.5.2022, 3.00 P.M** as per office clock time.

- 1) Bidding document is available <http://www.tenders.tn.gov.in> and website from **12.05.2022 to 26.05.2022**, 3.00 P.M. **Any Bids received after the deadline for submission of bids will be considered as non response.**
- 2) Evaluation of tender will be done as per tender transparency act 1998 of government of Tamil Nadu and rules there us.
- 3) Tenders will be opened by the Corporation Engineer or by an officer authorized by the Commissioner in the absence of Corporation Engineer for this purpose at 3.30 P.M. on the said date in the presence of such of the tenderers or their authorized representatives as may attend.
- 4) The E.M.D should be in the form of Demand Draft from any nationalized bank or scheduled banks payable at Madurai in favour of Commissioner, Madurai Corporation or by cash remitted at treasury counter, Madurai. The EMD is received after the prescribed date and time will be rejected. The EMD will not bear any interest. Tenders not accompanied by **Earnest Money Deposit** will be rejected. The Earnest Money Deposit will be returned to the unsuccessful tenderers within 15 days from the date of disposal of tender. In the case of successful tenderers, the EMD will be retained and converted as security deposit. **The Schedule cost should be Remitted at Treasury Counter Madurai Corporation (Original EMD must be submitted along with tender if not the submitted bids will considered as non response)**
- 5) If the tender is made by an individual, it shall be signed by him
- 6) If the tender is made by proprietary concern, it shall be signed by the proprietor with his usual signature and furnish his full name with the full name of firm and its current address
- 7) If it is made by the firm in partnership, it shall be signed by all the partners of the firm with their full names and current address, or by a partner holding the power of attorney for the firm by signing the tender in which case a certified copy of the registered power of attorney shall accompany the tender. A certified copy of the partnership deed, current address of all partners of the firm shall also accompany the tender.

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- 8) If the tender is made by a limited company it shall be signed by a duly authorized person holding the power of attorney and a certified copy of the registered power of attorney shall accompany the tender. Such limited company may be required to furnish satisfactory evidence of its existence before the contract is awarded.
- 9) The tenderer shall read carefully the erratum if any, incorporated in the tender documents. At any time prior to the last date and time specified for submission of tender, the Municipal Commissioner may for any reason, whether at his own initiative or in response to a clarification requested by prospective tenderer, modify the tender documents by the issuance of an Addendum.
- 10) In order to afford prospective tenderers reasonable time to take an Addendum into account in preparing their tenders, the Corporation Commissioner may, at his discretion, extend the last date and time for the submission of tenders.
- 11) Each tenderer while submitting the tender must send a copy of valid certificate of income tax clearance from the appropriate income tax authority in the form prescribed there for.
- 12) In the case of proprietary or partnership firm it will be necessary to produce the certificate above mentioned for the proprietor or proprietors and for each of the partner as the case may be.
- 13) Each tenderer while submitting their tender must also send a copy of certificate of Sales Tax clearance from the commercial tax department in the form prescribed therefore.
- 14) The tenders received without the certificates as aforementioned are liable to be rejected.
- 15) The tenderers who are themselves not professionally qualified shall undertake to employ qualified technical personnel at their cost to look after the work. The tenderers shall therefore state in clear terms whether they are professionally qualified or whether they undertake to employ technical staff, with qualifications required by the department (as indicated below) for the work. In case, the successful tenderer is professionally qualified or who has undertaken to employ technical staff, under him he shall see that one of the technically qualified staff is always present at the site of work during working hours personally checking all items of work and paying extra attention to such work which may demand special attention (e.g., ) R.C.C. work etc., The scale of qualification for the employment of technical staff and the rate of penalty for the failure on the part of the contractor to employ the technical staff for the work are as follows:
- 16) The tenderers shall present satisfactory evidence to the CE that they have been regularly engaged in such works they propose to execute and that they are fully prepared with the necessary capital, machinery and materials to begin the work promptly and to conduct it as required by the Tamilnadu Building practice and the other specifications for the particular work tendered for in the event of their tender being accepted. The tenderer shall furnish details of works on hand which are being executed by him in the proforma annexed.
- 17) No alteration whatever may be made in the text of the tender documents. Any remarks or explanations shall be set out in a covering letter. The form of agreement is furnished so that the tenderers may know what their liabilities and duties are. The tenderer shall sign each and every page of the tender documents issued by the Department and entire documents shall be submitted.
- 18) The rates quoted in the bill of quantities (Schedule A) shall be firm for finished work in site and no variation in the tendered rates is admissible.

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- 19) It must be clearly understood that the prices quoted in the tender are to include everything required to be done at site of work according to the conditions of contract and specifications and by the drawing therein referred to and also, all such works as are necessary for the proper completion of the contract though special mention thereof may have been omitted in the specification/drawings.
- 20) The tenderer shall be solely responsible for the payment of all Central or State Government Taxes and levies etc., Rates of works shall remain unaltered by any change that may be made from time to time in the rate at which taxes and levies are payable.
- 21) The rates shall be written both in figures and words legibly. Corrections if any shall be made by crossing out, initialing dating and rewriting, overwriting if any, shall also be initialed. Where rate is quoted in whole Rupees ..... without any decimal fraction, the word “only” shall be inserted after the rate quoted to prevent any manipulation. For example a rate quoted as “Rupees eight hundred” shall read “Rupees eight hundred only” after the insertion.
- 22) When there is difference in rate quoted by the tenderer in figure and in words, then the rate quoted in words only will be considered. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit prices shall prevail and the total price shall be corrected. The gross total amount of the tender will be finalized accordingly. If the contractor does not accept the correction of the errors, his bid will be rejected.
- The tenders shall be valid for acceptance for a period of 60 days from the date of opening of tenders.
  - The acceptance of the tender by the tender accepting authority shall be deemed to result in and constitute a valid and concluded contract binding on the tenderer notwithstanding the non execution of the contract agreement.
  - In respect of the successful tenderer, the EMD remitted along with the tender shall be converted as Security Deposit. The EMD remitted in any other approved forms by the successful tenderer converted to security deposit and he will be called upon to pay difference between 2% contract value and EMD remitted by the notified that and before signing the contract agreement.
  - It is open to the Corporation Council to insist on a higher security deposit upto a maximum of 10% of the contract value, wherever the department feels necessary.
  - The successful tenderer shall enter into an agreement in the prescribed form in non-judicial stamp paper having a face value of not less than Rs. 20/- purchased in his favour at his cost within 15 days after notification of the acceptance of his/their tender. If the successful tenderer fails to execute the agreement within the stipulated time, the work order will be cancelled and EMD forfeited.
  - The tenderer shall examine closely the standard contract terms and conditions of department and the Tamilnadu Building practice and also other specifications and general conditions of contract contained therein before submitting his/their rates which shall be for finished work it site. He/they shall also carefully study the drawings additional specifications and all the documents connected with the contract.
- 23) Every tenderer is expected before quoting his rates to inspect the site of the proposed work. He shall also inspect the quarries and satisfy himself about the quality and availability of materials. The names of quarries, kilns etc., where from certain materials are to be obtained will be given in the lead statement (Schedule C). In every case the material must comply with the relevant standard specification and only the best class of materials shall be used on the work. No extra charge shall be claimed towards extra lead or for any other reason later on after the acceptance of contract.

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- 24) The tenderer shall quote specific rates for each item in the (Schedule A) bill of quantities. The rates and prices entered in the schedules are to cover all the works and details described in the specifications or shown in the drawings and it is to be distinctly understood that no claim will be entertained which is based on the circumstances that works may be described in the specifications to which apparently no corresponding item is given in the schedules. Tenderer offering a percentage deduction from or increase on the estimate amount and those not submitted in proper form will be rejected, except in case of percentage tender system.
- 25) It shall be definitely understood that the dept. does not accept any responsibility on the correctness or completeness of the bill of quantities (Schedule A) accompanying this tender notice and that this bill of quantities is liable to alteration by omission deductions or additions at the discretion of the Corporation Engineer or as set forth in the conditions of contract.
- 26) A tenderer submitting quotation which the tender accepting authority considers very exorbitant and/or unreasonably low indicative of the tenderer not having understood the implications in the contract or is attempting to frustrate the object of the department or to exploit the board, will render himself liable to be debarred from tendering for such period as the tender accepting authority may decide.
- 27) No part of the contract shall be sublet without the written permission of the concerned Corporation Commissioner nor shall transfer be made by power of attorney authorizing others to receive payment on the contractor's behalf. In the case of individual of proprietary firm or firm in partnership or limited company the holder of power of attorney may be allowed to receive the materials, to receive cheques and to participate in the opening of tenders, signing of tenders, agreement duly furnishing the certified copy of the registered power of attorney and signing acceptance of measurements in M.Books provided that these powers are delegated in the registered power of attorney.
- 28) The tenderer shall ensure the rate of progress as stipulated period.
- 29) If the contractor fails to undertake to commence the work within 30 days after notification of the acceptance of his/their tender, the EMD/Security Deposit will be forfeited and contract is liable to be cancelled or terminated and the Corporation Commissioner concerned may thereupon at such times as he may think fit, arrange through any other person or persons to undertake or perform, provide, execute and do all works, materials or matters and things described in the tender schedule at the risk and cost of contractor.
- 30) Tenderers shall give in their tender their place of residence and office with full postal address. The delivering at the above named place or postings in a post box regularly maintained by the post office Department, or sending letter by registered post for acknowledgement of any notice, letter or other communication to the contractor shall be deemed sufficient service thereof upon the contractor.
- 31) When the value of work put to tender is more than Rs.25.00lakhs, the tenderers will be prequalified for offering their tender. The prequalification bids will be given to the eligible contractor (with class and monetary limit as specified by the department) free of cost on the request. The tender schedule will be issued only to the prequalified contractors/firms.
- 32) The Corporation council reserves the right to reject all or any of the tenders without assigning any reasons for so doing.
- 33) Tenders submitted by non registered or ineligible contractors will not be considered and will be returned to them unopened.

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## Section - II

### GENERAL CONDITIONS OF CONTRACT

#### DEFINITIONS AND INTERPRETATIONS

1. (1) In the contract, as hereinafter defined; the following words and expressions shall have the meanings hereby assigned to them except where the contract otherwise refers.
- (a) “Approved” means approved in writing including subsequent written confirmation of previous verbal and “approval” in writing as aforesaid.
  - (b) The dept. means the Corporation /Municipality
  - (c) “Contract” means the notice inviting tenders, letter tender, general conditions of contract, specifications, drawings, bill of quantities showing approximate quantities, quoted rates and amount against each item, rate of progress and the contract agreement.
  - (d) “Contractor” means the person or persons, firm or company whose tender has been accepted by the Board and includes the contractor’s personal representatives, successors, heirs, executors and administrators, unless excluded by the contract and permitted assignees.
  - (e) “Contract price” means the sum named in the tender subject to such additions thereto or deductions there from as may be made under the provisions of the contract.
  - (f) “Constructional plant” means all appliances or things whatever nature required in or about the execution, completion or maintenance of the works or temporary works (as hereinafter defined) but does not include materials or other things intended to form or forming part of the permanent work or temporary housing, hutting, office, stores etc.,
  - (g) “Department” – wherever occurring may be deemed to refer to ULB.
  - (h) “Engineer” means Municipal Engineer or any other engineer appointed from time to time by the department to act as such in connection with these works. Whenever any work is specified to be done or materials supplied to the satisfaction of the Engineer, it shall be taken as including his properly authorized assistants and duly authorized representatives.
  - (i) “Site” means the land and other places envisaged by the dept where the work or works are to be executed or carried out.
  - (j) “Specifications” means the standard specifications of TNPWD or Highways and any particular specifications set out for this particular contract. In the absence of any specification issued by the Department, the specifications issued by the Bureau of Indian Standard or sound engineering practice will apply.
  - (k) “Temporary works” means all temporary works of every kind required in or about the execution, completion or maintenance of the work.
  - (l) “Test” means such test or tests as per prescribed by the specifications or considered necessary by the Engineer.

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(m) “Work” means works to be constructed, completed and maintained in accordance with the contract.

## **2. SINGULAR AND PLURAL**

Words importing the singular only also include the plural and vice versa where the contract requires. Words importing persons shall include any incorporated company or a registered association or body of individuals or a firm of partnership.

## **3. HEADINGS OR NOTES**

The clause headings or marginal notes in these general conditions shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof the contract.

## **4. WORKS COMPRISED IN THE CONTRACT**

This contract comprises the execution and completion of the work described or mentioned in these specifications and in the schedules hereto, annexed and shown upon the drawings herein referred to, and all extra works which may be ordered under the powers herein contained. The drawings, specifications, schedules etc., are to be considered as explanatory of each other and no advantage shall be taken of any omission in any of these documents.

## **5. DISCREPANCIES**

Should any discrepancy appear in any of the documents and drawings included in the contract, or between different parts of the same documents, or any ambiguity or insufficiency of information the contractor shall point out the same to the Engineer in writing and receive his instruction, explanation or decision in the matter, before quotating the tender.

## **6. OMISSIONS**

In the event of anything reasonably necessary or proper to the due and complete performance of the work (of which the Engineer shall be the sole judge) being omitted to be shown or described in the drawings, specification and schedules, the contractor shall execute and provide at the rates noted in the bill of quantities (Schedule A) all such omitted works and things as if they had been severally shown and described and according to the directions of the Engineer and to his satisfaction.

## **7. BILL OF QUANTITIES (SCHEDULE - A)**

The contractor shall not be held responsible for the accuracy of the quantities set out in the schedules hereto attached but only for the accuracy of the prices, amount and totals therein appearing. The rate for each item of the work in the schedule shall be inclusive of the costs and charges of all materials labour, tools and plant necessary for full and complete execution of the work as described in the specification and schedule unless otherwise specified and for the due fulfillment of all the requirements relating thereto as specified in the contract. If any errors, omission or misstatement shall be discovered in the said quantities the same shall not vitiate the contract or release the contractor from the execution and completion of the whole or any part of the said works or from any of the obligations or liabilities of the contractor under this contract or entitle the contractor to any damages or compensation from the Board.

## **8. PREPARATION OF CERTIFICATES**

In presenting the interim or final certificates of payment of the contractor, the Engineer shall take into account the total quantities of work included in this contract as set out in the priced bills of quantities

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and should it appear after measurement that these quantities of work have been exceeded, he shall certify the amount so exceeded after getting the deviations approved by competent authority.

## **9. NET MEASUREMENT**

Should the final measurement of the work show that the total quantities of the various works executed are less than those set out in the bills of quantities the Engineer shall in like manner deduct at appropriate quoted rates the value of such difference from the total sum of the contract. The measurements above referred to will be taken and recorded as prescribed in the T.N.B.P. (latest edition).

## **10. DRAWINGS**

The drawings referred to in the contract will be detailed in schedule – B. They are signed by the Engineer authorized by the department. The Engineer may issue such further or amended drawings as he shall from time to time think fit and all such drawings signed by him shall be held to be included in this contract. Working drawings will be furnished from time to time by the Engineer to the contractor. No drawings shall be used by the contractor unless it has been signed by the Engineer.

## **11. CONTRACT GENERAL EXPLANATION**

The works under the contract and every addition, alteration or deviation directed to be executed under the contract or that may be necessary or properly to be done in order to perfect and complete the same shall be executed by the contractor in the best and most substantial and workman like manner, with materials of the best and approved quality of their respective kinds, according to the particulars contained in or implied by the specification and schedule attached and the said drawings, referred to or such other, additional particulars, explanations and drawings as may be given or approved by the Engineer, and to the full and entire satisfactions and directions from time to time given by the Engineer. The Engineer shall have full liberty from time to time and at all times to inspect, examine and test the materials and workmanship and may at any time reject any or all of several purposes they are applied or not in accordance with the said, bills of quantities, specifications drawings, instructions or directions.

## **12. CONTRACTOR'S LIABILITY**

The contractor shall be absolutely and solely responsible for whatever damages may be caused by of result from the execution of the works, whether these may have been carried out skillfully and carefully and strictly in conformity with the provisions of the specification or not. To this end the contractor shall at his expense, shore, sling, project, support, alter, restore and make good all houses, bridges, barns, buildings, drains, culverts, water mains, sewers, electric posts, fences or any other properties or things which may be disturbed or damaged during the execution of the works, shall he fail to do so, the same shall be carried out by the Engineer and the cost thereof recovered from the contractor. Care shall be taken out to move without the consent of the proper authorities, any pipe, culvert, cable, pole wire, building or other structures. If instructed by the Engineer in writing, permanent supporting works shall be constructed by the contractor, or the position of any existing work shall be changed. Such permanent work that may be ordered in working by the Engineer, if specified by him to be an extra work will be paid for on the valuation fixed by the Engineer.

## **13. POWER TO VARY WORK**

The description of work required to be executed by the contractor are set forth in the specifications, schedules and in the drawings, but the Engineer reserves the power to vary, extend or diminish the quantities of work, to alter the line, level or position of any work to increase, change or decrease the size, quantity, quality, description, character or kind of any work, to order the contractor to execute the works or any part thereof, by day or night work, or to add to or take from the work included in the contract as he may

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think proper without violating the contract and the contractor shall not have any claim upon the dept for any such variation, extension, diminution, alteration, increase, change or decrease other than for the work actually done, calculated according to the prices tendered and accepted in this contract.

#### **14. EXTRA FOR VARIED WORKS**

Any unforeseen additional work that may become necessary and is accordingly carried out under the contract under proper written orders from the Municipal Commissioner and shall be measured and value by the Engineer at the rates contained in the contractor's original agreement and if these rates do not apply then prior to execution of the additional work, a rate for such work shall ordinarily be agreed upon and entered in a supplement schedule and signed by both the Engineer and the contractor. If it is not possible to arrive at such an agreement, then the contractor shall be paid according to cost of labour employed and the materials used to which will be added 10 (ten) percent to cover the profit on the said work on his delivery of necessary vouchers to the Engineer.

#### **15. NOTICES REG. SHORING ETC.,**

In any case in which works of shoring or other works for the protection or security of buildings are necessary, the contractor shall within a reasonable period before the execution of such works serve notices upon the occupiers of the buildings intended to be shored up or otherwise secured and upon all other parties entitled to notice, apprising them respectively that such works are necessary, that the contractor is about to execute the same and will, at a time to be specified in such notice, enter upon the premises for the purpose of executing such works.

#### **16. CONTRACTOR TO BE RESPONSIBLE FOR ALL TRESPASSES AND DAMAGES**

- (A) In the event of accident to any persons including employees of the department on duty, damages to property, trespass on land, injury to animals or damage injury of any description to any person or thing arising out of the execution of the work, the contractor shall be held responsible for and make good the same and shall indemnify the department from all claims or expenses on account thereof, any if the department has to pay any money in respect thereof, the sum so paid and the costs incurred by the department shall be charged to the contractor as so much money paid to him on account of his contract and the contractor shall not be at liberty to dispute or question the right of the department to make such payment for him or his account, notwithstanding the same may have been made without his consent or authority, and decision or determination in law or otherwise to the contrary notwithstanding.
- (B) The department shall not be liable to, for or in respect of any damages or compensation or claim to therefore, under any act for the time being in force or common law because or by reason or in consequence of any accident or injuries to workmen or others in the employment of the contractor or any sub-contractor or of any person acting under him or on his behalf or the staff/persons employed by the department for supervision of the work under his contract and contractor shall save the department harmless and indemnify in respect thereof and of any and all costs and expenses incident there to or consequent thereon.
- (C) On the occurrence of accident which results in the death of any of the workman employed by the contractor or which is so sellous as likely to result in the death of any such workmen, the contractor shall, within 24 hours of the happening of such accident, intimate in writing to the Engineer the fact of such accident. The contractor shall indemnify the department against all loss or damage sustained by the department resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or fines if any payable by the department as a consequence of department failure to give notice under the workman compensation act or otherwise conform to the provisions of the said act in regard to such accident.

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## **17. ACCESS TO WORK**

The contractor shall ascertain himself of the number and nature of the existing roads and cart tracks available for access to the site of the work and make due provision in the rate for any difficulty involved in carting materials and surplus excavation.

## **18. CONTRACTOR NOT TO COMMENCE WORK ON PRIVATE PROPERTY UNTIL AUTHORISED**

The contractor shall not commence any work in or upon under across or through any land, house building, shed, yard, area, roadway, ground, garden or any other place being private property until authorized in writing by the Engineer so to do.

## **19. TEST**

Every part of the works all the materials to be used therein shall be subjected to such tests from time to time during the execution of the work as the Engineer may direct and the whole of such tests shall in all cases be made at the contractor's sole expenses.

## **20. CONTRACTOR RESPONSIBLE FOR FINISHED ACCURACY OF WORK**

The work will be set out by the Engineer who will give proper lines positions, level, depths and particulars on the ground-the contractor providing poles, rails bowing rods, straight edges struts, pegs etc., and all labour for fixing the same. The contractor must check and satisfy himself of the accuracy of such setting out and shall be responsible for the same and for the finished accuracy of the work in accordance with the contract. The contractor shall take every care that the pegs or pillars for levels or lines are carefully preserved from disturbances. Should he neglect this precaution the cost of resetting shall be born by him.

## **20. A) WORKS UNDER THE CONTROL OF THE ENGINEER WHO MAY REJECT MATERIALS OR WORKMANSHIP**

The work shall be carried on and completed under the exclusive control, direction and supervision and to the satisfaction of the Engineer. The Engineer shall likewise have full power to reject or condemn any workmanship or materials that he may deem unsuitable. In case of workmanship or materials being rejected by the Engineer, the contractor shall immediately remove and replace the same to the satisfaction of the Engineer, or the Engineer is hereby authorized to remove and replace the same, deducting the value of the work rejected or material removed or the cost of replacing the same, as he may think proper, from any amount due or that may become due to the contractor.

## **21. CONTRACTOR LIABLE FOR MATERIALS SUPPLIED BY DEPARTMENT**

- (a) The contractor shall be responsible for all materials and other articles and things which may be supplied by department from the time he takes delivery thereof and shall use them only for the purposes of this contract and shall make good any loss, breakages, damages, wastage or undue wear and tear that may take place from whatever cause and pay to department for such loss, damage, wastage or undue wear and tear such sum as the Engineer may determine.
- (b) The contractor shall take insurance for the total cost of the materials involved in the contract. The insurance premium will have to be paid by the contractor.
- (c) The contractor shall have an account of all materials and other articles and things that are supplied by the department from time to time and also inform to the Engineer place of storing etc., The Engineer is authorized to inspect such stores as and when required.

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- (d) As and when the Engineer inspects the site of work the contractor shall produce the materials available at site as on that date. If any shortage is noticed the Engineer who has actually verified the stores is empowered to recover the cost from the contractor's bills or dues from this or any other work or from security deposit.

## **22. CONTRACTOR'S SUPERVISION OF WORK**

- (a) The contractor shall give or provide all necessary superintendence during execution of the works and as long thereafter as the Engineer may consider necessary. Such superintendence shall be given by suitable person having adequate knowledge of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents) as may be requisite for the satisfactory construction of the works.
- (b) The contractor or a competent and authorized agent or representative approved of in writing by the Engineer (which approval may at any time be withdrawn) is to be constantly on the works and shall give his attention whole time to the superintendence of the same. Such authorized agent or representative shall be in full charge of the works and shall receive on behalf of the contractor directions and instructions from the Engineer. The contractor or such authorized agent or representative shall be responsible for the safety of all operations. Such authorized agent/representative shall on behalf of the contractor receive and have charge of at the site of the works, all drawing, specifications and schedule and of all writings, papers, and documents (or copies thereof) which may be delivered to or for the use of the contractor or for his guidance, and such authorized agent or representative shall also on behalf of the contractor receive, execute and obey all such instructions, and directions as may be given by the Engineer, and he shall not be changed without the consent of the Engineer. Instructions given to such authorized agent or representative shall be considered as having below given to the contractor.

## **23. SITE ORDER BOOK**

An order book will be kept by the (JE/AE) in-charge at the site of the works. Orders entered in this book by the Engineer, or any higher authorities shall held to have been formally communicated to the contractor. The (JE/AE) will sign each order as it is entered, and will hand over the duplicate to the contractor or his agent, who shall sign the original in acknowledgement of having received the order, or he can acknowledge receipt of orders in the book itself.

## **24. LEVELS ETC.,**

The levels and the other particulars shown upon the drawings such as the size and position of existing main, cables, railway lines, storm water drain etc., are believed to be contract, but the contractor must verify the same, as well as all other particulars of the contract on the ground, and he will be held responsible for the consequence of any error contained therein or omission there from.

## **25. EXCLUDED MATTER**

It is to be distinctly understood that the specifications are to receive their strict literal interpretations and that the works are in all respects to be carried out in accordance with them and the drawings, to the satisfaction of the Engineer. The decision, opinion, certificate or valuation of the Engineer with respect to all or any of the following matters shall be final and without appeal.

- a) The true intent or meaning of drawings
- b) The quality of the work carried out or materials supplied by the contractor

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- c) Any requirements of the Engineer under clause 29
- d) Measurements recorded in the measurement book

## **26. MUNICIPALITY MAY OCCUPY THE SITE AND EMPLOY OTHER CONTRACTORS**

The municipality expressly reserve to themselves the right to occupy for their own purposes of whatever kind, at any time and for so long a time as Engineer may by notice in writing to the contractor require, any portion or portions of the site of the works, whether the works to be executed thereon be commenced or be in progress or completed, and to employ thereon agents and workmen other than the contractor in the execution of any work not the subject of the contract and the contractor shall not obstruct such agents and workmen, but without extra charge and without relief from any liabilities or responsibilities incurred under the contract shall allow and provide them unrestricted access thereto and such facilities as in the judgment of Engineer may by him be reasonably demanded.

## **27. TEMPORARY DIVERSION OF ROADS AND COMMENCEMENT OF WORK**

- (a) During execution of the works the contractor shall make at his cost all necessary provision for the temporary diversion of roads, cart tracks, footpaths, drains, water courses, channels etc., shall he fail to do so, the same shall be done by the Engineer and the cost thereof recovered from the contractor.
- (b) The contractor shall furnish a “PERT” chart before commencement of the work.
- (c) The contractor must commence, execute and complete with such expedition as the Engineer shall require in a manner satisfactory to the Engineer all works for which he had accepted orders. Before commencing the work the contractor shall collect at the site all necessary materials required for the work. If required by the Engineer, the contractor shall commence and proceed with the work, at more than one place pointed out by the Engineer. He shall employ such numbers of men as may be considered necessary by the Engineer for the efficient and expeditious execution of the work.

## **WORKS ON PIPE LINES ALONG ROADS**

- (d) Before commencing the work, the contractor shall collect at the site all necessary materials required for timbering not less than 15% of the length involved in the contract subject to a minimum of 100m. If required by the Engineer the contractor shall commence and proceed with the work at more than one place pointed out by the Engineer along with the length of the pipelines included in the contract. He shall break up road way or ground only in such length at such times and at such places as may be ordered by the Engineer. The Engineer will from time to time lay down the minimum rate of progress for all classes of work based on the availability of pipes and other materials to be supplied by the board and the contractor must strictly adhere to the rates so laid down.
- (e) For all other works, within 7 days from the date of handing over the site, the contractor shall submit to the Engineer for his approval a programme showing the order of sequence which he proposes to carry out the works within the stipulated period for the completion of work and thereafter shall furnish such further details and information as the Engineer may reasonably require in regard thereto. The contractor shall also indicate in his programme the date of completion of each section/subhead included in the contract.
- (f) If the contractor does not maintain the tempo of works and maintain the rates of progress in the said manner, the Municipal Commissioner shall have the powers without vitiating the contract and he is authorized to take the whole or any part of works from the contractor and execute it either by direct labour or through the medium of other parties at the contractor's risk and cost.

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- (g) For judging the progress of the work, the contractor shall submit to the Engineer a monthly progress report in the form given below showing the correct progress of work each month so as to reach the Engineer not later than the sixth of every succeeding month.

Description of work	Qty. of work done up to end of last month	Qty. of work done during the month	Total Qty. done upto date	Total Qty to be done upto the month as per programme	Diff. More or less (5-4)	Remarks
1.	2.	3.	4.	5.	6.	7.

## **28. PENALTY FOR SLOW PROGRESS**

If the contractor fails to maintain the rate of progress of work as stipulated in clause 27, the Engineer shall have the power to impose as penalty such amount as he may deem fit for every day that the work remains uncompleted or unfinished after the proper date provided however the total amount of penalty imposed during the stipulated period of completion of the work shall not exceed 5% of the contract value.

## **29. SKILLED WORKMEN TO BE EMPLOYED**

Contractor shall employ in and about the execution of the works only such persons as are careful skilled and experienced in their several trades and callings and the Engineer shall be at liberty to object to and request the contractor to remove from the works any person employed by the contractor in or about the execution, of the works who in the opinion of the Engineer misconduct himself or incompetent or negligent in the proper performance of his duties and such persons shall not be again employed upon the works without the permission of the Engineer.

## **30. NOTICE TO TELEPHONE RAILWAY AND ELECTRIC SUPPLY UNDERTAKING**

The contractor shall give all notices required by any law or custom or as directed by Engineer and whether notice be so required or so directed or not, shall in all cases give due and sufficient notice to all persons and authorities having charge of the telegraph water and other pipes, sewers, culverts, drains, water courses railway, telephone, highways roads, streets, foot and carriage highways, pavement and other works, prior to commencements and at the completion of any work under this contract in order that the proper bodies or persons and see the works within their jurisdiction and all matters and things incidental and appurtenant thereto are secured, re-laid or reinstated in a proper and satisfactory manner and so that such bodies and persons may be enabled to attend and secure, shore up, alter the position or remove, relay and reinstate the works and things belonging to them but the contractor notwithstanding any notice given aforesaid shall be chargeable and responsible for the proper protection and restoration of all matters and things herein referred to.

## **31. OPENING FOR EXAMINATION**

No work shall be covered up until it has been examined by the Engineer & directions given by him to that effect and if the contractor covers up any work before it has been so examined, he shall uncover the same when required by the Engineer at his expense and shall the Engineer require it for his further satisfaction, the contractor shall at any period during the continuance of his contract pull down any part of the works and make such opening and to such extent through any part of the said works as the Engineer may direct and the contractor shall make good the same again to the satisfaction of the Engineer at the contractor's cost.

## **32. NIGHT WORK**

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The works shall without extra charges be carried on day and night without intermission shall there be any cause whatsoever which in the judgment of the Engineer, shall require it but no work shall be carried on in the night or on Sundays or in other than ordinary working hours without the prior sanction of the Engineer in writing save when the work is unavoidable or absolutely necessary for the sake of life or property or for the safety of the works in which case the contractor shall immediately advise the Engineer.

### **33. WATCHING AND LIGHTING**

The contractor shall at his expenses provide at the site of works sufficient lighting and watching and fencing by night and by day and shall in every respect conform to the police regulations in these matters and he shall free and relieve the department. Should be neglect to do so, the same shall be provided by the Engineer and the cost thereof recovered from the contractor.

### **34. PUMPING ETC.,**

The contractor shall at his expense pump out or otherwise remove any water which may during the continuance of the contract be found in the mains, cuttings, excavations, banks, foundations, trenches or works and may hamper the programme of all the works and be detrimental to the quality of work and shall provide all dams, pipes, drains, chutes, sumps and other means necessary for keeping the works thoroughly drained and clear of water below the lowest level of any part of the work as long as may be required by the Engineer and if considered necessary by the Engineer continuously day and night, by pumping with hand or steam or oil or other pumps and engines without damaging the existing or new structures nearby during the operation. Where required by the Engineer, sumps are to be sunk and the pumps fixed outside the trenches. The contractor will not be allowed except by written sanction of the Engineer to use any sewers (including those finished by himself) to carry or serve as an outlet for any water or sewage.

### **35. FILLING HOLES AND TRENCHES ETC.,**

The contractor immediately upon completion of the works shall fill up holes and trenches which may have been made or dug, level the mounds, or heaps of earth that may have been raised or made, and clear away all rubbish which may have become superfluous or have been occasioned or made in the execution of the works and the contractor shall bear and pay all costs, charges, damages and expenses which may be incurred or sustained on account or in consequence of any accident which may happen by means of holes and trenches connected with the works being dug and left unfenced or materials being left or placed in improper locations.

### **36. PROVISION FOR EXISTING DRAINAGE ETC.,**

The contractor shall make all necessary provision for permanent sewage water now discharging through the existing sewers, pipes, culverts, channels and drains. Such conveyance is to be carried out in a proper and workman like and hygienic manner to the satisfaction of the Engineer.

### **37. CONTRACTOR TO JOIN UP WITH WORK ALREADY EXECUTED**

The contractor will be required at his cost to bond into join up with and continue any work already done by the department and shall do all the work necessary in order to ensure a perfect junction between existing and new work which shall be thoroughly cleaned and wetted if required.

### **38. MATERIALS IMPLEMENTS AND LABOUR PROVIDED BY THE CONTRACTOR**

Except for such materials as are herein stated to be supplied by the department, the contractor shall at his cost and charges furnish all materials, planks, timber, carts, wagons, trucks, lights, pumps and cranes, iron work and metal work and also all plant, power and labour and everything necessary for the full and complete performance of this contract, including the construction, erection and maintenance of all fences, roadways paths and bridge ways for the traffic and he shall in like manner furnish lights and watchman and everything necessary for the safety of the public for the protection of properties adjoining the said contract works.

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### **39. ENGINEER TO HAVE RIGHT TO INSPECT PLACES FROM WHERE MATERIALS ARE OBTAINED**

All places wherein any materials are being made or obtained for the works and the whole of the process connected therewith and all the other operations of the contractor or any authorized sub-contractor, manufacturer and trade man shall be open to the inspection and control of the Engineer, and all persons authorized by him at all times.

### **40. MATERIALS AND WORKMANSHIP-INFERIOR WORK TO BE RECTIFIED**

If any materials brought upon the site or works on to the places where any operation have been or being carried out in connection with or for the purposes of the work, be in the judgment of the Engineer are inferior or improper description or improper to be used in the work the said materials or workmanship shall where required by the said officer be removed or amended by the contractor forthwith or within such period or periods as the said officer may direct. In case of each and every breach by the contractor of this clause the Engineer is hereby authorized to remove or cause to be removed the materials and workmanship so objected to or any part thereof, and replace the same with such other materials and workmanship as shall be satisfactory to him at the risk and cost of the contractor and for this purpose the cost certified by the Engineer shall be final.

### **41. PROCEEDING IN CASE OF DEFECTIVE WORK OR NEGLECT**

The provisions of the preceding clause shall also apply in the event of the contractor refusing or neglecting to pull down amend and reconstruct any work which, in the opinion of the Engineer, shall have been erected on insecure or insufficient foundation or shall not have been sufficiently secured and protected against immediate and future damage, pressure, action of water or otherwise, on being required so to do by the Engineer and within the period directed by him.

### **42. PLANT ETC. NOT TO BE REMOVED WITHOUT ENGINEER'S CONSENT**

The plant tools and materials provided by the contractor shall, from the time they are brought to the site of the work and during the construction and until the satisfactory completion of the contract become and continue to be property of the department and the contractor shall not remove the same or any part thereof without the consent in writing of the Engineer.

### **43. CONTRACTOR NOT TO OCCUPY LAND ETC., AFTER NOTICE FROM THE ENGINEER**

In no case shall the contractor continue to use or occupy or allow to be used or occupy any land or property either for the deposit of materials or plant or for any purpose whatever, after written notice from the Engineer is issued to the contractor at his usual or last known place of business and sent through the post office or other modes of delivery requiring the contractor to remove or cause to be removed all such materials from any such land or property as aforesaid or to give vacant possession of such land or property to the Engineer should any such materials or plant remain upon any such land or property or any such land or property remain occupied or be used after such notice for any purpose whatsoever as aforesaid, then and in every such case and as often as the same shall happen the contractor shall forfeit and on demand pay to the department charges fixed by the Engineer as and for liquidated and ascertained damages for each and every day during which the said lands or property are so used and occupied as aforesaid from the time such notice has been given.

### **44. RESPONSIBILITY FOR ACCIDENTS DAMAGES ETC**

The care of the whole of permanent works until their completion as defined in clause 50 and for the period prescribed in clause 59 and of the whole of the temporary works until their removal shall remain with the contractors who shall be responsible for all accidents or damages from whatever cause arising and chargeable for anything that may be stolen, removed destroyed or damaged to whomsoever belonging and

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also for making good all defect and damages to the said works or to any property adjoining or any cause whatever, whether such damage or defects were occasioned by the negligence of the contractor or not or may be or might have been discovered during the progress of the works or in consequence thereof, or shall appear to be known after the completion whereof or whether payment may wholly or partially have been made or the works approved as supposed to have been properly done any no certificate of approval of any works by any officer or members of the department shall affect or prejudice the right of the department against the contractor or be considered or held as at all conclusive as to the sufficiency of any works or materials.

#### **45. SCAFFOLDING INSTRUCTIONS**

All requisite scaffolding shall be provided at the contractor's expense and shall be double legged, i.e., it must have two sets of upright supports. Care must be taken to ensure the safety of the work people and the contractor must comply with such instructions as the Engineer may issue to ensure such safety. The contractor will be entirely responsible for any damage or injuries to persons or property resulting from ill erected scaffolding, defective ladders or otherwise arising out of his default in this respect. In this connection the contractor's attention is invited to the P.W.D. safety code prescribed in the T.N.B.P. P.349/Vo.II.

#### **46. BLASTING**

Blasting executed by contractors in connection with the department's works shall be carried out in the manner described under blasting operations instructions to contractors in T.N.B.P. The contractor is to protect the whole of the adjoining and where necessary the existing premises and all works and all fittings to all buildings on and adjoining the site against the structural and decorative damages caused by the execution of these works and make good in all respects all such damage done or occurring to the same and leave such reinstatement in perfect order. He is also to make good/any damage done to private footways and roadways.

#### **47. COMPLETED WORKS TO BE DELIVERED THEN AND THERE**

Portions of work ordered by the Engineer according to the minimum rate of progress, referred to in clause 27 above will have to carried out and completed in all respects and delivered to the municipality in a clean and perfect condition within the period of times mentioned in the said orders laying down such minimum rate of progress.

**48.** The contractor shall, without recompense claim or demand, delay or suspend the progress of the works any part thereof, if and when, and so often as required by the Engineer and for such time to times, as may in the judgment of the Engineer be necessary for the purposes or advantages of the undertaking, and shall, whenever directed by the Engineer and upon all needful occasions whether directed or not at the contractor's expense properly cover and secure so much of the work as may be liable to sustain damage from weather or any other cause and shall at all times and forthwith when required properly make good to the satisfaction of the Engineer all damage or injury which such works or any part thereof may have sustained.

#### **49. TIME AS THE ESSENCE OF CONTRACT-PENALTY FOR MON COMPLETION**

Time shall be considered as the essence of this contract on the part of the contractor and in case the contractor shall fail in the due performance of the works to be executed under this contract by and at the time, herein limited for completion thereof the contractor shall forfeit and on demand pay to the municipality as and for liquidated damages not by way of the penalty a sum not exceeding  $\frac{1}{4}$  (One fourth of hundred percent) value of the work for each and every day which may elapse between the extended and actual dates of completion and stipulated date of completion subject to a maximum of five percent of the value of the work, such payment shall not in any degree release the contractor from any further or other obligations and liabilities under this contract or from the complete execution and performance of this contract.

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## **50. DELIVERY WHEN PROVISIONAL AND WHEN COMPLETE CERTIFICATE OF COMPLETION EXECUTION OF WORKS BY DEPARTMENT DURING CONTINUANCE OF CONTRACT**

The completion and delivery at the time referred to in clause 47 or at subsequent time shall be deemed to be completion and delivery only if the Engineer shall accept the same and when so accepted shall not be deemed a full, complete and sufficient completion and delivery of the said works by the contractor to the municipality unless and until a certificate in writing called a certificate of completion under the hand of the Engineer shall have been given to the effect that all the works contracted for and directed to be executed have been completed and are in a sound water-tight, workman-like, and complete and usable condition and that the contractor has in the opinion of the Engineer reasonably fulfilled and completed his contract and undertaking, except so far as it relates to the maintenance of the works as hereinafter provided. Provided always and notwithstanding anything contained in the contract, it shall be lawful for the department to undertake and execute either departmentally or through other parties at any period during the continuance of this contract, any kind of work, matter or thing whatsoever, which they may consider necessary or proper to be performed and executed for the purpose of and in connection with any or all of the works under this contract and that without in any way relieving the contractor from any of his liabilities and responsibilities under this contract or in any way vitiating or voiding this contract.

## **51. RECOVERY OF MONEY PAYABLE TO DEPARTMENT ETC.,**

All losses, costs, damages and expenses and other money payable to the municipality by the contractor under any stipulation in the contract may be retained out of any money then due to contractor or which may subsequently become due from the department to the contractor under any contract. If this amount shall be insufficient to pay such losses, costs, damages it shall be lawful for the Engineer without any further consent on the part of the contractor, to sell and dispose of any or all of the Government, promissory notes or securities deposited with the municipality by the contractor and out of the proceeds of such sale, after payment of all expenses connected therewith pay to the municipality all such losses, costs, damages and expenses. If still the available amount shall be insufficient for such purpose then and in that case, it shall be lawful for the municipality to recover the residue thereof if necessary by legal proceedings and or by resorting to revenue recovery act against the contractor.

## **52. MUNICIPALITY MAY TERMINATE THE CONTRACT IN CASE OF INSOLVENCY OF WANT OR DUE DILIGENCE**

a) Should the contractor during the continuance of the contract die or become bankrupt or insolvent or go into liquidation or shall suspend payment or compound with his creditors or from any other cause whatever become unable or fail to carry on the contract with efficiency or unable to not progress with any portion of the work assigned to him in the programme given by the Engineer from time to time in the manner intended by the contract or his preparations for commencement and his subsequent rate of progress be slow from any cause whatever that in the opinion of the Engineer or his representative he shall be unable to complete the work by the expiration of the specified period or shall he refuse or neglect to comply with the directions given to him by the Engineer or his representative or in any other respect act contrary to the terms of the contract, the municipality shall have power to declare the contract as an end in which case the contractor or person shall only be entitled to receive and give discharge for the payment for such portion of the work as shall have been actually delivered in a serviceable condition at the date of such declaration, after due deduction of any sum that may be livable under the contract.

(b) The contractor shall in addition be liable to pay to the department or the department at their option shall be entitled to further deduct the amount of all losses, damages or expenses including any excess between the contract price of the works to be done under this contract or such portions there of as may not have been delivered at the date of such declaration as aforesaid and the price which the department may have to pay for the similar work provided in lieu of such portion as may not have been so delivered which the department may be put to or sustain by reason of or in consequence of the contractor's breach of

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contract. The above liability shall be in addition to forfeiture of the retention money and the security deposit specified in clause 55 hereunder.

When a contractor become insolvent/company winding up/contractor dies the loss should be recovered from the bill or any amount due to be paid to him.

### **53. MEASUREMENT OF WORK**

The work will be measured by the JE/AE. The contractor will be at liberty to accompany them in order that they may agree on the measurements but shall be neglect to do so, the measurements as recorded by the said officers shall be taken as final and conclusive. The measurements of works will be recorded as prescribed in the T.N.B.P., and as amended from time to time.

### **54. CERTIFICATE**

So long as he is satisfied with the rate of progress of the works and with the manner in which they are being carried out, the Engineer shall subject to the provisions herein contained, certify each month payments on account based on the actual quantity and description of the finished works executed by the contractor calculated according to the prices in the schedules hereto attached and measured in accordance with the provision contained herein, and the final certificate will be issued only for work which has been completely finished, tested and passed as satisfactory.

### **55. PAYMENTS AND RETENTION**

(a) Retention money or withheld amount from each running bill will be at 5% of contract value. Under the certificate to be issued by the Engineer on the completion of entire work, the contractor will receive the final payment of all the moneys due or payable to him under or by virtue of contract except security deposit and the retention amount equal to 5% of the total value of work done provided there is no recovery from or forfeiture by the contractor to be made. The amount withheld from the final bill will be retained under 'Deposits' and paid to the contractor together with security deposit after six months reckoned from the date of completion of work or as soon after the expiration of such period of six months as all defects shall have been made good according to true intent and meaning hereof whichever shall last happen. In the event the final bill remains unpaid even after the period of six months aforesaid the Engineer shall refund the security deposit and also the withheld amount on a separate bill if requested for by the contractor in writing. No certificate of Engineer shall be considered conclusive evidence as to the sufficiency of any work or materials nor shall it relieve the contractor from his liability to make good defects as provided by the contract. The contractor when applying for a certificate shall prepare a sufficient detailed bill based on the original figures of quantities and rates in the contract schedule to the satisfaction of the Engineer to enable the Engineer to check the claims mentioned in the application as are allowed by the Engineer shall be issued within (14) fourteen days of the application. In the case of road works, the security deposit and retention money will be released 12 months after completion of work.

(b) Income tax shall be deducted at two (2) percent of the gross amount of each bill or at the ruling rates fixed by the Government of India from time to time.

(c) In the event of the death or insanity or insolvency or imprisonment of the contractor or where the contractor being a partnership firm becomes dissolved or being a corporation goes into liquidation voluntary or otherwise, the contractor may at the option of the Municipal Commissioner, be terminated by notice in writing posted at the site of the works and all accepted and acceptable works shall forthwith be measured up and paid for at the rates provided in the contract schedule where such apply or otherwise, by the most recent schedule of rate approved by the competent authority to the person or person entitled to receive and give a discharge for the payment.

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## **56. LIMITATION OF CERTIFICATES**

No certificate made by the Engineer or other person appointed as aforesaid upon any bill submitted by the contractor shall be taken or deemed as certifying that the contractor has duly executed his contract or any portion thereof and no certificate thereof shall relieve the contractor of any obligation he would have been under, in the absence of such certificate, but the certificate given by the Engineer or other officer aforesaid shall be deemed to mean no more than that, at the time such certificate is given, the Engineer or other than temporary work, in respect of which the department might pay the sum stated in such certificate. No payment or certificate shall protect or be deemed to protect the contractor in case of over payment or in case it shall at any time appear that the works or any part of them have not been executed in accordance with this contract.

## **57. TIME FOR COMPLETION OF WORKS**

The contractor shall complete and deliver to the department the whole of the works comprised in this contract and shall complete the removal of all temporary works, plant and surplus materials within the stipulated period from the date of handing over of site. The whole of the works shall be delivered complete in every respect in a clean and perfect condition. Provided always that if by reason of the non-possession of any site or sites required for the purpose of undertaking the work or the non-supply of materials which the department has undertaken to supply for the work or enlargements of the work (which additions or enlargements the Engineer is hereby authorized to make) or for any other just cause arising with the said department or in consequence of any unusual inclemency of the weather, or general or local strikes or for want of deficiency of any orders, drawings or directions or by reason of any difficulties, impediments, obstructions, oppositions, doubts, disputes difference whatsoever and howsoever occasioned, the contractor shall in the opinion of the Engineer (whose decision shall be final) have been unduly delayed or impeded in completion of this contract, it shall be lawful for the Engineer to grant from time to time and at any time or times by writing under his hand such extension of time either prospectively or retrospectively and to assign such other day or days for completion without thereby prejudicing or in any manner or affecting the validity of the contract or the adequacy of the contract price or the adequacy of the sums or prices mentioned in the schedules and any and every such extension of time shall be deemed to be in full compensation and satisfaction for and in respect of any and every actual or probable loss or injury sustained or sustainable by the contractor in the premises and shall not entitle him to claim or demand department for and in respect of the delay occasioned by the cause or causes in respect of which any and every such extension of time shall have been granted.

## **58. FINAL CERTIFICATE**

When the works of this contract are completed, the contractor shall submit a demand that the Engineer shall make a final measurement of the works and take over the whole of the works on behalf of the department and issue a final certificate to enable him to submit a final bill for payment. The Engineer shall thereupon unless he shows reasons in writing to the contrary, make a final measurement of the works and take them over on behalf of the department and sign a certificate purporting to be a last certificate. Nothing in this clause or in the agreement shall prohibit the department taking over and using any portion of the works which may be completed prior to the completion of the whole works of this contract.

## **59. DEFECTS OR FAULTS APPEARING WITHIN DEFECT LIABILITY**

Notwithstanding any certificates issued by the Engineer under clause 54 and clause 58 any defect, shrinkage or other faults whatsoever which may appear.

- (a) In respect of original civil works, within 6 months and
- (b) In respect of roads electrical, mechanical and pile laying works within one year from the completion of the respective works and the grant of final certificate and arising out of defective or improper materials or

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workmanship upon the direction of the Engineer, to be amended and made good by the contractor at his cost within 15 days and in case of default, the Engineer may cause such work to be executed or may take any measure or do anything which may in his opinion be necessary for rectifying the defect or fault in the works and the cost of so doing shall be recoverable from the contractor.

## **60. PERIOD OF LIABILITY**

The contractor notwithstanding such execution of works, matters and things as lastly provided and any act, matters and things done, permitted, happening or suffered in pursuance of during the continuance of this contract as lastly provided shall be responsible for and shall effectively maintain and uphold in good, substantial, sound perfect and water tight condition all and every part of the said works, for a period of (a) six months in respect of original civil works and (b) Twelve months in respect of electrical, mechanical and pipe laying works, and roads from and after the date of such last mentioned certificate of completion and shall pay and make good to the department and all other persons or parties legally entitled thereto all losses, damages, costs and expenses they incur or in consequence of the operations of the contractor or of the failure from whatever causes of the works or any of them during the time the contractor is responsible there for and shall indemnify and keep indemnified the department and other persons or parties as aforesaid from the against the same and from and against all actions, suits, claims and demands whatsoever by reasons or on account thereof or the department may deduct and retain or pay to such other persons or parties entitled as aforesaid the amount of such losses, damages, costs or expenses out of any amount in the hands of the department or occurring or due to the contractor. If any portion or portions of the work are found to be defective during the period of liability and repaired as stated in clause 59 above, the period of liability for that portion of the work which has been so repaired shall be extended to a further period of (a) six months in respect of original civil works and (b) Twelve months in respect of electrical, mechanical and pipe laying works roads from the date of completion of the repairs.

## **61. PAYMENT OUT OF PUBLIC FUNDS**

The payments to the contractor shall be made out of the funds under the control of the department in their public capacity and no member or officer of the department shall be personally responsible to the contractor.

## **62. SUBLETTING TRANSFERRING OR ASSIGNING CONTRACT**

The contractor shall not sub-let the whole of the works except where otherwise provided in the contract. The contractor shall not sublet any part of the works without the written consent of the Engineer and such consent if given shall not relieve the contractor from any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the contractor, his agents, servants or workmen as fully as if they were the acts, his agents servants or workmen. Provided always that the provision of labour on a piece-work basis shall not be deemed to be a sub-letting under this clause. In the case of individual or proprietary firm or firm in partnership or limited company, the holder of power of attorney may be allowed to receive the materials, to receive cheques and to participate in the opening of tenders, signing of tenders. Agreement duly furnishing the certificate copy of the registered power of attorney and signing acceptance of measurements in measurement books provided that these powers are delegated in the registered power of attorney.

## **63. PROTECTION AGAINST CLAIMS FOR THE USE OF PATENTS**

All fees for any patented invention articles or arrangements that may be used upon or in any manner connected with the construction erection and maintenance of the works or any part thereof embraced in these specifications, shall be included in the price mentioned in the bills of quantities and the contractor shall protect and hold harmless the department against any and all demand for such fees or claims and before the final payment and settlement is made on account of this contract the contractor if required must furnish acceptable proof of a proper and satisfactory release from all such claims.

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## **64. OLD CURIOSITIES**

All old curiosities, relics, coin, minerals etc., found in excavating or pulling down, shall be the property of the department and be handed over to the Engineer. Should any ancient masonry or other old work of interest be opened up, the Engineer's attention shall be called to the same before demolition or removal.

## **65. ARBITRATION**

(I) If the contractor claims that the decisions or the instructions of the Municipal Commissioner are unjustified and that accordingly, he is entitled to extra payments on account thereof, he shall forthwith notify this to the Municipal Commissioner to record his decisions and reasons therefore in writing and shall within two weeks state his claims in writing to the Municipal Commissioner thereafter. The Municipal Commissioner shall thereafter within four weeks of the receipt of the claim, reply to the points raised in the claim. Unless resolved by negotiation or discussion immediately thereafter, within further four weeks, the question of liability for such payment will be treated as a dispute.

(ii) In the contract whenever, there is a discretion or exercise of will, by the Engineer/Department during the progress of the work, the mode or manner of the exercise, of discretion shall not be a matter for arbitration.

(iii) The decision of Engineer/Department shall be final and binding on all parties to the contract upon all questions relating to the meaning of specifications, designs, drawings and instructions, and to the quality of workmanship of materials used on the work or any matter arising out of or relating to the specifications, designs and drawings and instructions concerning the works or the erection of or failure to execute the same arising during the course of works. The above shall not be subject matter of arbitration and in no case shall the work be stopped consequent on such a dispute arising and the work shall also be carried out by the contractor strictly in accordance with the instructions of the Engineer/Department.

(iv) In case any question, difference or dispute shall arise on matters other than sub clauses (ii) and (iii) above and except any of the "excluded matters" mentioned in clause 24 touching the construction of any clause herein contained on the rights, duties and liabilities of the parties hereto, or any other way touching or arising out of these presents, the same shall.

(a) In cases where the total value of claims, under the contract is less than Rs. 50,000/- be referred to the interpretation decision and award of a Superintending Engineer of the department as the sole Arbitrator whose decision shall be final and binding on the parties to the contract.

(b) In case where the value of claims is more than Rs.50,000/- the parties will seek remedy through the competent civil court having local jurisdiction.

(c) The provisions of the Indian Arbitration and Reconciliation Act 1998 and the Rules there under and any statutory, modification thereof shall be deemed to apply to such references and deemed to be incorporated in the contract. The Arbitrator, shall state the reasons for the award.

(d) Provided always the contractor shall not except with the consent in writing of the Engineer, in any way delay carrying out works in any such matter, question or dispute being referred to Arbitration but shall proceed with the works with all due diligence and shall until the decision of the Engineer/Department and no award of the Arbitrator competent civil court shall relieve the contractor of his obligations to adhere strictly to the instructions of the Engineer/Department with regard or the actual carrying out of the works.

## **66. CONTRACTOR'S RISK AND INSURANCE**

The work executed by the contractor under the contract shall be maintained at contractor's risk until the work is taken over by the Engineer. The contractor shall accordingly arrange his own insurance, against fire and other usual risk during such period which includes natural calamities such as floods, or any other acts of God and no claim by the contractor for the above mentioned will be entertained by Department at Bidder's Signature

any stage. The contractor shall also take personal accident insurance policy in favour of each worker employed by him in any job pertaining to this contract. He may also ensure that similar personal accident insurance policy available in the market is taken in respect of each workman employed by his sub contractor. If the contractor fails to take out the personal accident insurance policy available in the market as above and accident occurs, an amount equivalent to the compensation payable to the personnel will be deducted from the bills payable to the contractor for the work done or from any other work in department and kept in deposit account for being paid ultimately to the injured person or to the heirs in case of death.

#### **67. CONTRACTOR RESPONSIBLE FOR THE PROVISION OF HEALTH AND SANITARY ARRANGEMENTS FOR THE WORKERS EMPLOYED**

The contractor shall provide at his own expense first-aid appliances and medicines including an adequate supply of sterilized dressing and sterilized cotton wool kept in good order under the charge of a responsible person who shall be readily available during working hours. Water of good quality fit for the drinking purposes shall be provided for the work people on a scale of not less than 15 litres per head per day. Every water supply storage shall be at a distance of not less than 15 metres from any latrine, drain or other source of pollution.

Where water has to be drawn from any existing well which is within such proximity of latrine, drain or other sources pollution, the well shall be properly chlorinated before water is drawn from it for drinking. Adequate washing and bathing places shall be provided separately for men and women and such places shall be kept in clean and drained condition. Latrines and urinals shall be provided with the precincts of work place and the accommodation separately for each of them shall be at the rate of 2 seats upto 50 persons, 3 seats above 50 persons but not exceeding 100 persons, and 3 seats for every additional 100 persons. The contractor shall employ adequate number of scavengers and conservancy staff to maintain the latrines and urinals in a clean condition. Two sheds one for meals and the other for rest shall be provided separately for the use of men and women workers. Creches shall be provided according to the number of workmen workers and properly maintained. All these amenities shall be provided at the contractor's own expenses besides providing sheds for his workmen.

#### **68. TECHNICAL AUDIT CLAUSE**

It is a term of this contract that department shall have the right to carry out post payment audit and technical audit by the engineers of technical audit cell located in Commissionerate of Municipal Administration or elsewhere. The technical audit officer shall have the powers to inspect the work or supply, examine running account bills, final bills and other vouchers, measurement books, test reports and other documents either during progress of work or after completion of same and order recoveries from the contractor for recorded reasons even though he might have been paid earlier. These recoveries are enforceable against the contractor from any amount due to him or security deposits or withheld amounts or any amounts due to contractor or may become due to him from the department on any other work or supply.

**69.** As all the roads are proposed as Paver finish roads, the tenderer should have paver mixing plants.

Bidder's Signature

**Municipal Administration and Water Supply Department**

**Madurai Corporation**

**Section – IV**

**FORM OF AGREEMENT**

Articles of Agreement made this ..... Hundred  
and ninety nine ..... between  
Thiru..... hereinafter referred to as the  
contractor which expression shall where the context so admits include his heirs, executors, administrators  
and legal representatives of the one part and the Corporation (hereinafter called the Department) which  
expression shall where the context so admit include its successors in office and assigns) of the other part.  
Whereas the contractor delivered to the Department the tender which was opened on ..... one  
thousand nine hundred and ninety where by the contractor offered and undertook to carry out the works  
specified under this contract and accessory work in name of work.

In the state of Tamilnadu in India, and provide the works, materials matters and things described or  
mentioned in these presents at the prices set forth in the schedule annexed to such tender and the contractor  
also undertook to do all extra and varied works which might to ordered as part of the contractor on the terms  
provided for in the conditions and specifications hereto annexed and Department accepted such tender in  
pursuance where of the parties here have entered into this contract.

And whereas the contractor in accordance with the terms of the said tender has deposited in the office  
of the..... Engineer, the due and faithful performance by the contractor  
of this contract, the sum of Rs..... (Rupees.....)

And whereas the contractor fully understands that on receipt of communication of acceptance of  
tender from the accepting authority, there emerges a valid contract between the contractor and Department  
represented by the officer accepting the agreement and the tender documents i.e., tender notice, letter of  
tender, bill of quantities and other schedule, general conditions to the contractor and special conditions of  
the tender, negotiation letter communications of acceptance of tenders, shall constitute the contract for this  
purpose and be the foundation of rights of both the parties, as defined clause of tender notice. Now hereby  
agreed that no consideration of payment of the said sum of Rs.....  
(Rupees.....) or such other sum as may be arrived at under the clause of  
the General conditions of the contract relating to payment of final measurement at unit prices, the contractor  
shall and well within the time specified in his letter of tender thoroughly and efficiently and in a good  
workman like manner perform, provide, execute and do all the works, materials matters of things incidental  
to or necessary for the entire completion of the works specified under this contract and necessary works  
including all works shown in the drawings hereinafter referred to or described or set forth the said  
specifications and schedule hereto annexed and in accordance with such further drawings and instructions as  
the Engineer of the Department or other Engineer duly authorised in that behalf thereinafter and in t he  
annexed documents referred to as the Engineer) shall at any time in accordance with the said schedule (Bill  
of quantities) and specifications provide and give together, with any alternations in the works or additions  
thereto, in the time and manner in such schedule (Bill of quantities) and specifications stipulated to the entire  
satisfaction of the Engineer, and their successors covenant and agree with the contractor that during the  
progress of the works and on the completion of contract to the satisfaction of the Engineer, the Department  
shall and will from time to time on receiving the certificate in writing of the Engineer, the Department shall  
and will from time to time on receiving the certificates in writing of the Engineer pay to the contractor  
according to such certificates and the terms of this contract subject nevertheless to deductions or additions

Bidder's Signature

thereto or there from which may be lawfully made under terms of this contract. It is hereby mutually agreed and decreed as follows.

- a) All certificates or notices or orders for items or for extra varied or altered works which are to be the subject of an extra or varied charge shall be in writing shall not be valid or binding or be of any effect whatsoever.
- b) The terms contract shall include these presents and the notice inviting tender, letter or tender, bill of quantities and other schedules general conditions and specifications hereto annexed and plans drawings herein and hereafter referred to.
- c) The arbitrator for fulfilling the duties set forth in the arbitration clause of the general conditions of the contract shall be.
- i) If the contractor claims that the decisions or the instructions of the Engineer/Department are unjustified and that accordingly, he is entitled to extra payments on account thereof he shall forthwith notify this to the Engineer/Department to record his decisions and reasons there for in writing and shall within two weeks state his claims in writing to the Engineer/Department thereafter. The Engineer/Department shall thereafter within four weeks of the receipt of the claim, reply to the points raised in the claim. Unless resolved by negotiation or discussions immediate thereafter within further four weeks the question of liability for such payment will be treated as a dispute.
- ii) Engineer/Department during the progress of the work, the mode or manner of the exercise of discretion shall not be a matter for arbitration.
- iii) The decision of the Engineer/Department shall be final, conclusive and binding on all parties to the contract upon all questions relating to the meaning of specifications, design, drawings and instructions, and as to the quality of workmanship or material used on the work or any matter arising out of or relating to the specifications, designs and drawings and instructions concerning the works or the erection of or failure to execute the same arising during the course of works. The above shall not be the subject matter of arbitration and in case shall the work be stopped consequent on such a dispute arising and the work shall also be carried out by the contractor strictly in accordance with the instruction of the Engineer/Department.
- iv) In case any question, difference or dispute shall arise on matters other than sub clauses (ii) and (iii) and above and except any of the "exclude matters" mentioned in clause 24 touching the construction of any clause herein contained on the rights, duties and liabilities of the parties hereto or any other way touching or arising out of these presents the same shall.
- a) In cases where the total value of claims, under the contract is less than and up to Rs . 50,000/- be referred to the interpretation decision and award of a Su pretending Engineer of the Department at the sold Arbitrator whose decision shall all be final and binding on the parties to the contract.
- b) In case where the value of claims is more than Rs. 50,000/-the parties will seek remedy through the competent civil court having local jurisdiction.
- c) The provisions of the India Arbitration and Reconciliation Act 1998 and the rules there under the statutory modification thereof shall be deemed to apply to such reference and deemed to be incorporated in the contract. The arbitrator shall state the reasons for the award.
- d) Provided always the contractor shall not except with the consent in writing of the Engineer in any way, delay carrying out works with all the diligence and shall until the decision of the Engineer/Department and no award of the Arbitration/Competent Civil court shall relieve the

Bidder's Signature



contractor of his obligations to adhere strictly to the instructions of the Engineer/Department with regard to the actual carrying out of the works.

- e) Time shall be considered as essence of the contract and the contractor hereby agrees to commence the work within 30 days from the date of acceptance of his tender by the Department complete the work within. Three/Six/Nine months and to show progress at the stipulated rate subject nevertheless to the provisions for extension of time contained in clause 57 of the general conditions of contract.

In witness where of the contract ..... On behalf of the Department have caused there common seal to be affixed the day and year first above written. Signed, sealed and delivered by the said.

In the presence of

Signature of Contractor

Name and seal.

Signature, Name and  
Designation of work.

Signed, by on behalf of  
Municipal corporation/Municipality / ULB  
Signed, Name and  
Designation of witness.

Commissioner \_\_\_\_\_ Madurai Corporation /

Bidder's Signature

**SECTION V**  
**LETTER FOR NEGOTIATION**

In pursuance of negotiation with the Superintending Engineer of ..... Corporation  
on.....

I/We agree to reduce the rates for the items in the Scheduled s follows.

---

Sl.No.	Item No. in the Schedule	Reduced rate per unit
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Signature of contractor.

Bidder's Signature

## SECTION-VI

### FORM FOR EXTENSION FO TIME

1. Name of work as in Agreement :
2. Estimate No. and amount :
3. Estimate value put to tender :
4. Agreement No. and amount :
5. Date of handling over of site :
6. Date fixed for completion :
7. Extension of time already granted :

Reasons					
Extension	Executive Engineer's Reference No. and Date	Period	Due to contractor	Due to Department	Due to natural calamities

I. Extension

II. Extension

(Copies of orders shall be enclosed)

8. Period for which now extension as applied for by contractor.

Reasons					
Extension	Executive Engineer's Reference No. and Date	Period	Due to contractor	Due to Department	Due to natural calamities

1.

2.

3.

Bidder's Signature

9. Extension time now recommended :
10. a) Remarks for the justification for Recommendation of extension of Time (If not recommended as Requested by the contractor, Reasons for rejection or Shortening the duration) :
10. b) Whether any penalty has been Imposed already :
- 11.. Whether any penalty has been proposed For the delay cause due to the hindrance Of the contractor :
12. Whether any penalty imposed is to be Refunded :
13. Remarks regarding the progress shown by Contractor after imposing penalty :
14. Details of extra work and amount involved (Additional item, etc.,) :
- (a) Total value of extra work :
- (b) Proportionate period of extension of Time based on estimated amount put to Tender on account of extra work :
15. Total extension of time required for 9 and 14:

Date:

Superintending Engineer

Madurai Corporation

Bidder's Signature

## **LETTER OF CONSENT**

**“ I AGREE TO ABIDE BY ALL THE STANDART CONTRACT TERMS AND  
CONDITIONS NOTIFIED BY THE CE WHICH I HAVE AND UNDERSTOOD”.**

**“ I CERTIFY AND CONFIRM THAT NONE OF MY FAMILY MEMBERS (FAMILY AS  
DEFINED IN THE CORPORATION ACT) ARE HOLDING ANY OFFICE IN THE  
CORPORATION.**

**CONTRACTOR**

Bidder's Signature

## **CENERAL SPECIFICATION FOR MATERIAL**

All material required for the works shall be procured and supplied by the contractor himself. The material shall be of good quality and conforming to relevant BIS. The material which are classified for ISI marking should be supplied with ISI marking only.

### **1. Cement**

The entire quantity of cement and steel required for the work will be procured by the contractor. The contractor is responsible for all transport and storage of the material and shall bear all related cost. The employer shall be entitled at any reasonable time to examine the cement and steel supplied by the contractor.

The cement procured by the contractor shall comply with the requirements of IS 269/1976 with the latest revision thereof for ordinary Portland cement and IS 3112/1989 with the latest revision thereof for 43 grade ordinary Portland cement. It shall be of the best normal setting quality unless specially rapid hardening or quick setting quality if expressly instructed by the Engineer to be supplied. Each bag shall bear ISI certification mark and as per specification no. 10. of TNBP volume I.

The steel bars shall comply with the requirements set forth in the IS 432 part I, IS 1139, IS 1786 as the case may be with the latest revision thereof and the test as described for ultimate tensile strength bond test and elongation test.

All reinforcing steel shall be clean and free from oil, grease, loose scales or rust or other coatings of any character which would reduce or destroy the bend. Each bundle containing the bars shall bear the ISI certification mark.

All cement / steel shall be tested in nearby laboratories of Government Polytechnic, or Government engineering college or Regional Testing Laboratory by the Employer. Two samples should be taken by the Engineer in charge in the presence of the contractor or his authorized representatives or the technical personnel employed by the contractor as in the agreement. The contractor shall without extra cost provide samples and cooperate in the testing of the cement/steel. One sample shall be got tested and the other sample shall be retained by making clear identification in the sample by the Engineer in charge so as to identify at a later date. The cost of such test shall be borne by the contractor.

All cement shall be procured in bags and shall be stored in a dry place for which the contractor shall be responsible. Consignment of bagged cement shall be properly stacked in a manner which will permit easy access for inspection and definite identification. Cement shall be used in approximately in the chronological order in which it is received, but cement that has been stored for a period longer than 4 months from the date of initial sampling shall not be used unless it has been retested at the expenses of the contractor and passed by the Engineer in charge as good quality on the retest. Cement aged more than 180 days from the date of initial sampling shall be rejected.

Cement which has become caked or perished shall on no account be used on the works and shall be rejected. Although the engineer may have passed any consignment, he shall however have the power at the subsequent time to reject such consignment if he finds that any deterioration in the quality thereon has taken place.

A record of the quantity of cement/steel procured with the name of dealer, bill number and date shall be maintained by the contractor. This should be produced for examination by the Engineer in charge at any time. The age of the cement shall be reckoned from the date of manufacture and it shall be verified by the Engineer in charge.

The rejected consignment of cement and steel should be removed from the site within two days.

The water used in making and curing of concrete, mortar and grout shall be free from objectionable quantities of silt, organic matter, injurious amounts of oils, acids, salts, and other impurities etc., as per I.S. specification No. 456-1978.

The Engineer-in-Charge will determine whether or not such quantities of impurities are objectionable.

Such determination will usually be made by comparison of compressive strength, water requirement, time of set and other properties of concrete made with distilled or very clean water and concrete made with the water proposed for use. Permissible limits for solids when tested in accordance with I.S. 3025-1964 shall be as tabulated below.

Bidder's Signature

**Permissible limit for Solids:**

	Maximum permissible limit	
1. Organic	200	mg/litre
2. Inorganic	3000	mg/litre
3. Sulphates (as SO <sub>4</sub> )	500	mg/litre
4. Chlorides (as CL)	2000	mg/litre for plain concrete work and
	1000	mg/litre for R.C.C. work
5. Suspended matter	2000	mg/litre

If any water to be used in concrete, mortar or grout is suspected by the Engineer-in-Charge of exceeding the permissible limits of solids, samples of water will be obtained and tested by the Engineer-in-Charge in accordance with I.S. 3025-1964.

**BRICKS:****a) Manufacture :**

Common burnt clay building bricks shall conform to the requirements of IS 1077 and shall be of quality not less than class 50 with moisture absorption rate not exceeding 15% as defined in IS : 1077. The bricks shall be chamber burnt and shall not be damaged in any manner and sizes shall conform to the works sizes specified with tolerates as given in 6.2 of IS : 1077.

**b) Samples :**

The Contractor shall deliver samples of each type of brick to the Engineer, and no orders shall be placed without the written approval of the Engineer. All the bricks used in the works shall be of the same standard as the approved samples. The samples shall be preserved on site, and subsequent deliveries shall be checked for uniformity of shape, colour and texture against the samples. If in the opinion of the Engineer any deliveries vary from the standard of the samples, such bricks shall be rejected and removed from the site.

**c) Uniformity :**

The bricks selected for exposed pointed brickwork walls shall be of uniform colour, deep cherry red or copper colour and uniform texture. Only such bricks as are permitted by the Engineer shall be used.

**d) Testing :**

Samples of the bricks shall be tested in accordance with IS : 3495 by the contractor for compliance with the aforesaid, before any order is placed and soon after receipt of a consignment. Tests shall be carried out as and when required by the Executive Engineer on samples selected by the Executive Engineer's representative.

**e) Laying :**

Brickwork shall be uniformly bedded, bricks being laid upwards. Each brick shall be floated and rubbed in upon such sufficient quantity of mortar that the mortar is squeezed up into the joints, but if such joints are not filled with mortar by this process they shall be flushed up with the mortar from the next succeeding bed. The courses shall be laid truly and strictly to line and horizontal level.

**f) Bond :**

Brickwork courses shall be alternatively laid in stretcher bond and header bond. Damaged bricks shall not be used. The greatest care shall be taken to prevent mortar dropping on to or in any other way disfiguring or discolouring the bricks and all edges and sides shall be kept strictly plumb and square, in-line and flush with the required finished face. As the work proceeds, it shall be continuously checked with a 2m long straight edge and spirit level.

Bidder's Signature

**g) Construction :**

Walls shall be carried up in uniform manner and no one portion raised more than 1m above another at any one time, the open end being raked out. Over-hang work shall in no case be permitted. Brickwork shall be cleaned down after each day's work and newly laid brickwork shall be protected by suitable means.

**h) Dry weather :**

In dry weather the suction rate of clay bricks shall be adjusted by wetting as necessary before use. Bricks shall be stored in a free draining area and protected from rain.

**i) Lintels :**

Where brickwork rests upon lintels or supporting ribs of concrete, the bricks shall be cut as necessary and carefully bedded so that proper support to the outer leaf of brickwork is obtained.

**j) Pointing :**

At the time of laying, all joint of exposed brickwork shall normally be raked out neatly and pointed to 15mm depth.

**k) Approval :**

All workmanship shall be strictly in accordance with the foregoing. The Engineer or the Engineer's representative reserves the right to reject any of the work on grounds of shabby workmanship. Such rejected work shall be removed and rebuilt to the Engineer's satisfaction.

**MORTAR**

The cement mortar to be used on the work should be generally conform to specification No.13 of TNBP. Only sufficient mortar shall be mixed as required for immediate use. Partly set mortar shall not be used.

**Preparation of Mortar:**

Unless otherwise specified, the cement mortar used in Masonry works shall be cement mortar mix MM5 (1:5) grade using minimum 288 Kgs. of cement per cubic meter of mortar.

Mixing shall be done thoroughly preferably in a mechanical mixer. In such cases, the cement and sand in the specified proportions shall be mixed dry thoroughly in the mixer operated manually or by power.

Water shall be added gradually and wet mixing continued at least for 3 minutes. Water should not be more than that required for bringing the mortar to the required working consistency of 90 to 130 milli meters as required in clause 9.11 of I.S. 2250-1981. The mix shall be clean and free from injurious kind of soil, acid, alkali, organic matter or deleterious substances.

**Time of use of Cement Mortar:**

Cement mortar shall be used as soon as possible after mixing and before it has begun to set, within 30 minutes after the water is added to the dry mixture.

Mortar unused for more than 30 minutes should not be used and shall be removed from the site of work. The cost of such wasted mortar shall be borne by the bidder. The use of retempered mortar will not be permitted to be used for the masonry.

**Tests of Mortar:**

Mortar Test cubes shall be cast for the mortar used on the work and shall be tested in accordance with Appendix-A of I.S.2250-1965 code of practice for preparation and use of Masonry Mortars. Such cubes shall develop a compressive strength of at least 50 Kgs/square centimeter for MM5 (1:5) Grade cement mortar mix, 75 Kgs/square centimeter for MM 7.5 (1:4) grade cement mortar mix and 30 Kgs/ square centimeter for MM-3 grade cement mortar mix.

Mortar not conforming to the specifications will be rejected, and the cost of such wasted mortar shall be borne by the bidder.

Bidder's Signature



## 2. Aggregates

Sand shall generally conform to the grading of sand given in clause 4 of IS.2116-1189 as detailed below in Table 4(b).

Table 4(b):	Grading of Sand for use in Masonry Mortars:
I.S. Sieve Designation	Percentage passing by Mass
4.75 mm	100
2.36 mm	90 to 100
1.18 mm	70 to 100
600 Micron	40 to 100
300 Micron	5 to 70
150 Micron	0 to 15

A sand whose grading falls out-side the specified limits due to excess or deficiency of coarse or fine particles may be processed to comply with the standard by screening through a suitably sized sieve and/or blending with required quantities of suitable size and particles.

The cost of sand for masonry will not be measured and paid separately and the cost of sand including the cost of stripping, transporting and storing and royalty charges shall be included in the unit price per cubic meter bid therefore in the relevant item of work in the bill of quantities for which this and is required.

The maximum quantities of deleterious material in the aggregates, as determined in accordance with IS 2386 (part II)/1963 shall not exceed the limits given in table I of IS 383. Unless otherwise specified all coarse aggregate in RCC shall be graded aggregate of 20mm nominal size. All aggregates shall be stored in hard impervious surface to ensure exclusion of all foreign material and as per IS 4082/1977 and specification no.5 of TNBP volume I.

Aggregates having a specific gravity below 2.6 (saturated surface dry basis) shall not be used without the special permission of the Engineer.

## 3 Admixtures

Only where a beneficial effect is produced shall any admixture be used and that too after test has been carried out to convince the Engineer that no harmful effect will be produced by the use of such admixture and after approval by the Engineer. The admixture shall conform to IS 9103/1972.

## 4 Form work and centering

Steel/wooden form centering shall be used. If wooden form work is used, it shall consist of planks not less than 40mm thick and strong props. This shall be provided complying with clause 10 of IS 456/2000 and specification no.30.8 of TNBP. The timber for form works shall be best hard wood and got approved by the Engineer in charge. This shall be deemed to be included in the items of contract even otherwise specified.

## 5 Separator (cover block)

For bottom cover of beams, slabs etc., separators of pre-cast cement mortar blocks of suitable size with wire embedment as directed shall be used and tied to the reinforcement. Between layers of reinforcements, separators consisting of pieces of bars of suitable diameters shall be used. The required cover shall be provided as per clause 24-4 of IS 456/2000.

Bidder's Signature

## **CIVIL WORKS**

### **1. General :**

Tamilnadu Building Practice (TNBP) shall be strictly followed for carrying out different items of work for which no standard specifications are available and no alternate specification have been given under the description of works.

Where any provision of the TNBP is repugnant or at variance with any provision under BIS or description of work, technical specifications and conditions of contract, the provisions of the latter shall be deemed to supercede the provision of the TNBP.

### **2. Earthwork :**

#### **Specification**

Tamilnadu Detailed Building Practice (specification no.23 to the extent applicable) shall be followed for earthwork excavation.

#### **Conveyance :**

The excavated earth, blasted rubble etc., shall be conveyed and deposited in suitable places as directed by Engineer in charge within 150m of plant site on one side of the trench only.

#### **Disposal of surplus earth :**

The excavated soil which is surplus to that required for refilling and after allowing for settlement will have to be removed, spread and sectioned at places shown on the site during execution for purpose of widening or leveling the road. Sectioning is to be done as detailed in TNBP. The cost of removal of surplus earth after spreading/leveling/sectioning at site approved by the Engineer in charge to the disposal site will be measured under the relevant item of work in BOQ.

#### **Shoring, Strutting and Bailing out water**

The rate for excavation of trench work shall include charges of bailing out water wherever necessary and no extra payment will be made for any of these contingent works. While bailing out water, care should be taken to see that the bailed out water is properly channelised to flow away without stagnation or inundating the adjoining road surfaces and properties.

For shoring and strutting, the rate for excavation for the first 2m depth from GL shall include. Shoring and strutting beyond 2m depth from GL, payment will be made as per respective item in BOQ.

### **3. Concrete :**

#### **Specification**

Concrete for use in the works shall generally comply with TNBP (specification no.30) and the relevant BIS. The concrete mix shall be in specified proportions satisfying the maximum aggregate size, water cement ratio and required cube strength and workability as per IS 456-2000. Such concrete must be adequately vibrated to form solid mass without voids. The entire concreting works should be done only with the prior approval and the presence of Engineer in charge.

#### **Mixing of concrete**

The concrete shall be proportioned as far as cement and aggregate are considered by volume. The amount of water required being measured either by weight or volume the adjustments must be made to frequent intervals at the discretion of the Engineer or his assistant to account for the moisture content of the aggregates. The mixing operation shall be performed only in a mechanical concrete mixer and shall continue until the whole batch of uniform consistency and colour. The mixing of concrete shall be done in accordance with clause 8 and 9 of IS 456-2000.

Bidder's Signature

### **Transporting, Placing and Compacting Concrete**

Transportation, placing and compaction of concrete mix by mechanical vibrators shall be done in accordance with clause 12 or IS 456-2000. It is imperative that all concreting operations be done rapidly and efficiently with minimum re-handling and adequate manpower shall therefore be employed to ensure this.

The forms shall be first cleaned and moistened before placing concrete.

The mix should not be dropped from such a height as it may cause segregations and air entrainment. When the mix is placed in position, no further water shall be added to provide easier workability.

No concrete mix shall be used for the work if it has been left for a period exceeding its initial setting time before being deposited and vibrated into its final position in the member.

While one concrete is being placed in position it shall be provided generally complying with clause 12.4 of IS 456-2000 and as directed by the Engineer in charge. The efficiency of tempering and consolidation will be judged by complete absence of air pockets, voids and honeycombing after removal of form works.

### **Curing**

Curing shall be done to avoid excess shrinkage or harmful effort to the members generally complying with clause 12.5 of IS 456-2000.

The method adopted shall be effective and any special method used must be approved by the Engineer and be subject to complete supervision.

Any deficiency in concreting such as cracking, excessive honeycombing, exposure of reinforcement or other fault which entail replacement of the defective part by fresh concrete and whatsoever remedy reasonable required without hampering the structural safety and architectural concept, all at the cost of contractor.

### **Removal of Form Work**

Removal of form work shall be done as per TNDSS and as per IS 456-2000 and as directed by the Engineer in such a manner that no damage is caused to the concrete work.

### **Testing of concrete**

During the course of construction works, preparation of test specimens, curing and casting of concrete shall be done in accordance with IS 1199 and IS 516 to ascertain the strength requirements and acceptance criteria indicated in IS 456-2000. The contractor shall provide all apparatus, labour and arrange to test the cubes at his own cost at the test laboratory decided by the Employer.

In addition to the above test, any other test which may if desired by the Engineer in charge be carried out from time to time as per relevant specifications at the cost of contractor. In case the concrete does not meet the strength required, all corrective measures shall be taken at once at the contractor's cost.

The inspection and testing of structures shall be done in accordance with clause 16 of IS 456-2000.

## **4. Masonry**

All masonry works such as Random Rubble / Coarse Rubble / Brick work must be done as per TNBP specification and Bid schedule specification.

## **5. Plastering**

Plastering would be 12mm, 20mm and 25mm thick cement plaster either plain or with water proof cement as may be specified.

The plastering items shall be executed in thickness and cement mortar of proportion as detailed in respective item in the BOQ. Similarly the plastering shall be either ordinary or with water proof for components as specified in respective item in the BOQ.

Bidder's Signature

In case of water proof plaster standard and approved water proofing compound shall be mixed in cement mortar in required percentage as directed and then the plaster is applied.

The finishing shall be either smooth or rough as may be directed by the Engineer unless otherwise specifically mentioned in the BOQ.

Neat finishing wherever directed by the Engineer shall be done at no extra cost.

Curing and watering shall be done as directed and plaster shall be in alignment and level. Any substandard work is liable to be rejected and shall have to be redone at contractor's cost. Sand to be used shall be of approved quality only. Cost of all scaffolding shall be included in the rates quoted in the BOQ.

## **GENERAL CONDITIONS OF CONTRACT**

### **A PREFACE**

Intent and reference to Tamil Nadu Building Practice

1. It is intended by this Tamil Nadu Practice to describe.
  - (a) the character of the materials to be used;
  - (b) the method of execution of work and
  - (c) the contractor's responsibilities to the Public, Government and his workmen and general contract conditions which are to be accepted by every contractor who executes work entrusted to him by the Department.

Wherever the term "Standard Specifications" or "Specifications" or to the abbreviation

T.N.B.P. No; or TNBP is used in the specifications or in estimates or contract documents, it shall refer to the relevant, specification in the Tamil Nadu Building Practice.

The Abbreviation "I.S." shall mean "Indian Standard-".

2. Applicability of the Tamil Nadu Building Practice.

It shall be unnecessary to include in any contract documents a specification for any item of work which is defined in the tender notice or in the contract schedule of work to be done by a Tamil Nadu Building Practice number (TNBP No.) The fact that the item is defined as specification, shall mean that the contractor is to execute the work according to such specification modified as may be necessary by an addendum specification for that particular item of work. In the absence of specification for any work or material in the T.N.B.P. such work should be carried out in accordance with the instruction given by the Corporation Engineer.

THESE GENERAL CONDITIONS OF CONTRACT SHALL APPLY TO ALL AGREEMENTS ENTERED INTO BY CONTRACTORS WITH THE MANAGING DIRECTOR MADURAI etc and shall form an inseparable condition of contract, and it shall not be necessary to append a copy of the same to the agreement.

3. Contractor to sign in the Division (or the sub-Divisional) copy of the T.N.B.P.

Every contractor who executes work for the Public Works Department or the Highways Board and Rural Works Department shall carefully study the schedule for work to be done and his drawings, obligation under the "General Conditions of Contract" which apply to all agreements, and he shall sign in the Municipality copy of the

Bidder's Signature

T.N.B.P. (or the Sub-Divisional copy if so arranged by the Corporation Engineer)

as evidence that he understands clearly the conditions of contract governing his agreement and accepts the same.

It shall not be necessary for the contractors to sign the Municipality copy of the

T.N.B.P. for every contract awarded to him, but his signature therein will be evidence that he accepts the conditions of contract (which include the standard specifications) as detailed in the T.N.B.P. for every contract into which he enters. It shall also be the contractor's responsibility by frequent perusal of the Municipality copy to become conversant with sanctioned alterations or additions made to the

T.N.B.P. as soon as they are made. A separate volume of addenda to the T.N.B.P. will be maintained in the Municipality as the case may be in which will be entered all sanctioned corrections and additions. This must also be studied and signed by every contractor before executing an agreement. Interleaving correction slips will not be made for his purpose. The contractor should purchase copy of, the T.N.B.P. for his reference while executing work.

#### **4. Sub-specifications:**

4.1 Works of similar nature having many common clauses in their specification are grouped under one specification number with a "General" preface thereto, and the sub-specification are therefore given an alphabetical affix.

5. Additions and alterations to the T.N.B.P.

5.1 Additions and alterations to the T.N.B.P. will be incorporated in the addenda volume as authorised by the Chief Engineer.

6. Powers of Corporation Engineers to supplement or alter the T.N.B.P.

6.1 Corporation Engineer may alter the specification for any particular which is within their respective powers of sanction, when such alteration is found necessary by attachment of a correction sheet to the contract form, bearing the T.N.B.P. Number, the corrections and the signature of the Corporation Engineer as the case may be, together with the signature of the contractor. Similarly additional specifications, for items for which there are no standard specifications will be made by attachment to the contract documents of addendum specifications sheet bearing the signature of the Corporation Engineer as the case may be and the signature of the contractor.

### **A.I. DEFINITIONS AND INTERPRETATIONS.**

#### **7. Definition of terms:**

Wherever the words and expression defined in this clause or pronouns used in their status occur in contract documents which includes the T.N.B.P, they shall have the meanings hereby assigned to them except where the context otherwise requires:

- (a) "Corporation Engineer" means the Corporation Engineer for the time being in charge of the concerned work under execution or such other departmental assistants or subordinates to whom  
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the Corporation Engineer may have delegated certain duties, acting severally within the scope of the particular duty entrusted to them.

- (b) No delegation by Corporation Engineer which affects agreements. It is however, to be distinctly understood that the Corporation Engineer or the higher authority who is vested with the powers of acceptance of the particular agreement under reference will make no delegation of powers to such assistants or subordinates which in any affects the agreement and its contract condition when such agreement is to be or has been accepted by the "Corporation Engineer" or by the other higher authority respectively- The duties of such assistants or subordinates will be solely duties of supervision to ensure compliance with contract conditions.
- (c) "Contractor" means the particular persons, firm or corporation with whom an agreement has been made by the Corporation Engineer or higher authority as the case be, for executing work defined in the concerned agreement, and for purposes of instructions regarding compliance with contract conditions, it shall include the contractor's authorized agent, who is maintained on the work by the contractor.
- (d) Works or work means the works by or by virtue of the contractor contracted to be executed whether temporary or permanent and whether original, altered substituted or carriage or additional or connected, with the supply repairs or carriage of tools and plant and supply or manufacture of other stores.'

**Words importing the singular only also include the plural and vice-versa where the context requires.**

8. **Evidence of experience** -Tenderer shall, if required, present satisfactory evidence to the Corporation Engineer that they have been regularly engaged in constructing such works, as the proposed to execute and that they are fully prepared with the necessary capital, machinery and materials to begin the work promptly and to conduct it as required by the T.N.B.P. and the other specifications for the particular work If tendered for, in the event of their tender being accepted,

9. Legal address Notices:

9.1 Tenderers should give in their tender their place of residence and postal address. The delivering at the above named place or posting in a post box regularly maintained by the Post Office Department or sending by loiter registered for acknowledgement of any notice, letter or other communication to the contractor shall be deemed sufficient service thereof upon the contractor is writing as may be changed at any time by an instrument executed by the contractor, and delivered to the Corporation Engineer.

9.2. Nothing contained in the agreement and his contract conditions shall be deemed to prejudice or render inoperative the service of any notice, letter or other communications upon the contractor personally.

**B. STATEMENT OF APPROXIMATE QUANTITIES IN SCHEDULE - A**

The quantities mentioned in tender notices and in agreement schedule A are worked out from the relevant drawings in office and may or may not be the actual required for execution. The Corporation Engineer does not expressly or by implication agree that the actual amount of work to be done will correspond therewith but reserves the right to increase or decrease the quantity of any class or portion of the work as he deems necessary.

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Tenderer must satisfy themselves by a personal examination of the site of the proposed work by examination of the plans and specifications and by other means as they prefer as to the accuracy and sufficiency of the statement of quantities and all conditions affecting the work and shall not any time after the submission of their tender, dispute or complain of such statement of quantities or assert, that there was any misunderstanding in regard to the nature or amount of the work to be done nor in consequences apply for extension of time for completion beyond the agreement date.

**11. Approximate not to mean deviation from drawings and specifications:**

This declaration of the approximate nature of the statement of quantities in Schedule A does not, however, in any way imply that the quantities will be increased for departure by the contractor from strict compliance with sanctioned drawings and specifications to suit his own convenience or reduce his costs.

**12. To compare tenders:**

The quantities in Schedule A are given for a uniform comparison of lump-sum tenders.

**C. DRAWINGS AND SPECIFICATIONS**

**13. Purpose:**

The contract drawings if any, read together with the contract specifications are intended to show and explain the manner of executing the work and to indicate the type and class of materials to be used.

**14. Conformance:**

The works shall be carried out in accordance with the drawings and specifications which form part of the contract and in accordance with the details and instructions, supplementing or explaining the same as may from time to time be given by the Corporation Engineer.

If the work shown on any such further drawings or details, or other work necessary to comply with any such instructions, directions or explanations be in the opinion of the contractor, of a nature which the schedule rate in the contract does not legitimately cover he shall before proceeding with such work, give notice in writing to this effect to the Corporation Engineer. In the event of the Corporation Engineer and contractor failing to agree as to whether or not there is any excess rate to be fixed and the Corporation Engineer deciding that the contractor is to carry out the said work, the contractor shall accordingly do so, and the question whether or not there is any excess and if so the amount thereof, shall failing agreement, be settled by an arbitrator as provided in the arbitration clause, unless the subject is one which is left to the sole discretion of the Corporation Engineer under the clauses of these conditions of contract and the contractor shall be paid accordingly.

It shall be the responsibility of the contractor to give timely notice to the Corporation Engineer regarding anything shown on the drawings and not mentioned in the specification, or mentioned in the specifications and not shown in the drawings or any error or discrepancy in drawings or specifications and obtain his orders thereon. Figure dimensions are to be taken and not those obtained from scaling the drawings. In any discrepancy between drawings and specifications, the latter shall prevail. In any such cases or in case any feature of the work is not fully described and set forth with the drawings and specifications the contractor shall forthwith apply to the Corporation Engineer for such further instructions, drawings or specifications as he requires it, being understood that the subject to be dealt with under the building procedure of best modern practice. The Corporation Engineer will furnish the further instructions, drawings or specifications if in his opinion; they are required by competent workmen, for the proper execution of the work.

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**15. Variations by way of modifications omission or additions.**

For all modifications, omissions from or additions to the drawings and specifications, the Corporation Engineer will issue revised plans, or written instructions or both, and no modifications, omissions or additions shall be made unless authorized and directed by the Corporation Engineer in writing.

The Corporation Engineer shall have the privilege of ordering modifications, omissions or additions at any time before the completion of the work and such orders shall not operate to annul these portions of the specifications with which said changes do not conflict.

The contractor shall submit to the Corporation Engineer a statement giving details of the claims for any additional work within 30 days of the order of the work and no claim for any such work will be considered which has not been included in the statement.

**16. Copies of drawings and specifications:**

One copy of the available drawings and specifications (apart from the T.N.B.P. a copy of reference) shall be furnished free of cost to the contractor for his own use. Such copies and copies of supplementary details furnished by the Corporation Engineer shall be kept by the contractor on the work until the completion thereof, and the Corporation Engineer shall at all times have access to them.

**17. Signed drawings -No authority to the contractor.**

No signed drawing shall be taken as in itself an order for variation, unless either it is entered in the agreement schedule of drawings under proper attestation of the contractor and the Corporation Engineer, or unless it has been sent to the contractor by the Corporation Engineer, with a covering letter confirming that the drawing is an authority for variation of the contract under reference.

**D. MATERIALS AND WORKMANSHIP**

**18. To be the best quality:**

All materials, articles and workmanship shall be the best of their respective kind for the class of work described in the contract specification and schedule, materials being obtained from sources approved by the Corporation Engineer. The word "best" as used in these specifications shall mean, that in the opinion of the Corporation Engineer there is no other superior quality of materials or finish of articles on the market and that there is no better class of workmanship available for the nature of the particular item described in the contract schedule. The contractor shall, upon the request of the Corporation Engineer, furnish him with the vouchers to prove that the materials are such as are specified.

Samples of materials shall be furnished at the contractor's expenses to the Corporation Engineer when called for in the tender notice or ordered to be furnished by the Corporation Engineer prior to execution of any work.

**19. Conventions for proportions:**

Wherever the proportions are written by figures without further description and where the meaning is otherwise clear as to which figure is intended to apply to each material, then the usual conventions will be understood to apply to each material then the usual conventions will be understood to apply.

**For example:**

**1.2. Means 1 lime (or cement in accordance with the context) and 2 sand;**

**1.2.4. Means 1 lime (or cement in accordance with the context) 2 sand and 4 broken stone (or other aggregate in accordance with the context).**

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**20. Measurement and mixing:**

In the case of loose materials such as lime sand, cement, broken stone, surki, mortar, etc the proportions demanded by the specifications must be measured in properly constructed measuring boxes or weighed or in such other manner as shall be instructed by the Corporation Engineer. Measurement is not to be done in loose heaps when intimate mixtures such as mortar, concrete, etc., are to be formed. The mixing must always be done on closely constructed platforms. So that there will be no leakage of any of the materials through the floor of the platform and also that no foreign materials can be incorporated during the mixing. These platforms must be approved by the Corporation Engineer. The cost of such measuring boxes and platforms and all the work referred to herein shall be borne by the contractor.

**21. Data:**

The materials and labour utilized in the execution of work by the contractor shall not be less than that given in the Tamil Nadu P.W.D. Standard Data for the relevant item.

NOTE: In case the contractor considers that the materials and labour provided in the

T.N.P.W.D. standard data for the execution of particular items of work are in excess, the contractor may furnish detailed data for such items along with tender with reason for variations from P.W.D. Standard Data.

**22. Layout of materials stocks:**

The contractor shall deposit materials for the purpose of the work on such parts only on the ground as may be approved by the Corporation Engineer. He shall submit for the approval of the Corporation Engineer before starting work, a detailed site survey clearly indicating positions and areas where materials shall be stacked and sheds built.

**23. Deleted****24. Deleted****25. Test inspection and rejection of defective materials and works:-**

The contractor shall provide proper facilities at all for the testing of materials and inspection of the work by the Corporation Engineer, and the Corporation Engineer shall accordingly also have access at all times to the places of storage or manufacture where materials are being made for use under the contract to determine that manufacture is proceeding in accordance with the drawings and specifications.

The contractor shall, upon demand, also forward for the Corporation Engineer's inspection, test certificate supplied by the vendors, when he is purchasing consignments of cement, steel and other materials in respect of which such certificates are usually available.

The Corporation Engineer shall have power to reject at any stage, any work which he considers to be defective in quality of material or workmanship and he shall not be debarred from rejecting rough materials by reasons of his having previously passed them in an unworked condition. Any portion of the work or materials rejected or pronounced to be inferior or not in accordance with the drawings and specifications, shall be taken down and removed from the work site at the contractor's expense, within 24 hours after written instructions to that effect have been given by the Corporation Engineer. Replacement shall at once be made in accordance with the specifications and drawings at the contractor's expense.

In case of default on the part of the contractor to carry out such orders the Corporation Engineer shall have power to employ and pay other persons to carry out the orders at the contractor's risk and all expenses consequent thereon and incidental thereto shall be borne by the contractor.

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In lieu of rejecting work not done in accordance with the contract, the Corporation Engineer may allow such work to remain and in that case shall make such allowance for the difference in value, as in his opinion may be reasonable.

Works opened for inspection The Contractor shall at the request of the Corporation Engineer within such time as the Corporation Engineer shall name open for inspection any work covered up; and should the contractor refuse or neglect to comply with such a request, the Corporation Engineer may employ other workmen to open up the same. If the said work has been covered up in contravention of the Corporation Engineer's instructions or if on being opened up, it be found not in accordance with drawing and specifications of the written instructions of the Corporation Engineer the expenses of opening it and covering it up again, whether done by the contract or such other workmen, shall be borne by or recovered from the contractors. If the work has not been covered up in contravention of such instructions or if on being opened up it be found i.e. he in accordance with the drawings and specifications or the written instructions of the Corporation Engineer, the expenses aforesaid shall be borne by Government and shall be added to the contract sum. provided always that in the case of foundations, or any other urgent works so opened up and requiring immediate attention the Corporation Engineer shall, within reasonable time after the receipt of a notice from the contractor that the work has been opened, make or cause the inspection thereof to be made, and at the expiration of such time if such inspection shall not have been made, the contractor may cover up the same, and shall not be required to open it up again inspection except at the expense of Government.

## **26. Defects, shrinkages, etc., after completion.**

Any defects, shrinkage or which may appear within from the corn pie works arising in the opinion of the Corporation Engineer from faulty materials or workmanship not in accordance with the drawings and specification instructions of the Corporation Engineer shall open the directions in writing of the Corporation Engineer and within such reasonable time as shall be specified therein, be amended and made good by the contractor at his own cost unless the Corporation Engineer shall decide that the contractor ought to be paid for the same at the rates agreed on such reduced or other rates as the Corporation Engineer may fix and in case of default, the Corporation Engineer may employ (and pay other persons to amend and make good such defects, shrinkage or other faults or damage. and all expenses consequent thereon and incidental thereto shall be borne by the contractor.

(A) The shrinkage period of six months referred to in main clause 26.1 above will be five years in respect of all contracts for construction of original buildings either semi-permanent or permanent to ensure structural stability of the building.

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Provided that in the event of Government taking over portions of the works as and when they are completed the liability of the contractor under this clause shall extend to a period of years from the date of final taking over of the work irrespective of the actual dates on which portions the works were taken over,

## **27. Corporation Engineer's decision:**

To prevent disputes and litigation, it shall be accepted as an inseparable part of the contract that in matters regarding materials workmanship, removal of improper work, interpretation of the contract drawings and contract specifications, mode of procedure and the carrying out of the work, the decision of the Corporation Engineer shall be final and binding on the contractor and in any technical question which they arise touching the contract the Corporation Engineer's decision shall be final and conclusive.

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**28. Dismissal of Workmen:**

The contractor shall employ in and about execution of the works only such persons as are careful, skilled and experience in their several trades and callings and the Corporation Engineer shall be at liberty to object to and request the contractor to remove from the works any person employed by the contractor in or about the execution of the workshops in the opinion of the Corporation Engineer misconducts himself or incompetent or negligent in the proper performance of his duties and such persons shall not be again employed upon the works without the permission of the Corporation Engineer.

**D.1. GENERAL OBLIGATIONS****29. Contractor's maistri or agent and contractor's staff:**

29. 1. The contractor shall in his own absence keep constantly on the works a competent mastery or agent and any directions or explanations given by the Corporation Engineer or his representatives to such mastery or agent shall be held to have been given to the contractor.
- 29.2. The contractor shall further provide all staff which necessary for the proper supervision, execution and measurement of the work to ensure full compliance with the term of the contract.

**30. Government masteries or agents:**

The Government may be represented on the work by an agent clerk of the works, or mastery who is not borne on the Official or officers and subordinates of the Regional Executive. He (if appointed) shall, in the absence of the Corporation Engineer, furnish the contractor with the Corporation Engineer's or his representative's instructions of the works and the contractor shall duly comply with such instructions and directions and shall on the written requisition of the mastery Clerk of works or agent, stay the further progress of any portion of the works which in his judgment is being constructed with unsound or improper mastery or workmanship, until the opinion and determination of the Corporation Engineer shall be obtained thereon, but such mastery, clerk of works or agent is to have no power whether to order any extra works or deviation from the specification and drawings.

**E. INCLUDED IN CONTRACT RATES****31. Defining contract schedule rates:**

The rate entered in a contract schedule for any class of work shall be for finished work in situ and shall include all contingent expenses whether direct construction expense involved in the building in place in accordance with the drawings and specifications or whether they be expenses imposed by an outside authority such as a local body. Such contingent expenses shall not entitle the contractor to claim an extra in respect thereof.

**32. CARRIAGE.**

Rates for finished work shall always include the cost of conveyance and all leads, lifts, loading, unloading and stacking in the manner and at the place ordered by the officer in immediate charge of the work, unless circumstances necessitate provisions for a separate schedule item, in which class such will be specified in the tender notice or schedule.

Wherever the term "Carriage" or "Conveyance" is used in a schedule item, it shall in the absence of other schedule provisions or modifying description, in the specification, be taken to include all leads, lifts, loading, unloading and stacking in uniform stacks to the satisfaction of the Corporation Engineer with careful attention to close packing in case of materials which are to be measured in stacks as a basis of payment for finished work.

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NOTE- 1. In the case of important leads and lifts as may occur in river conservancy and othersuch works, where lifts over flood banks and long leads may be involved, it is usual to make separate schedule item provision with a specification defining the exact work to be done for each tendered rate.

NOTE - 2. Payment for carriage will originally be by bulk or weight at a rate between specified places and on the basis of the method adopted in the standard schedule of rates for carriage of materials. The distances will be measured by the nearest practicable and cheapest routes, whether metalled or unmetalled road or cart track.

32.3 when carts or vehicles of any sort are engaged by the day, the quantity of materials to be

**conveyed, the distance to be travelled and the number of trips to be made shall, if he considers necessary be fixed by the Corporation Engineer.**

The contractor is responsible for making good all loss in transporting materials entrusted to him or his agents, whether caused by wastage, breakage, theft or any other cause.

No payment shall in any case be made on the return trips with carts. Where there are loads also for the return trips the agreement rates should allow for the reduced cost thereby on each set of materials so conveyed,

### **33. Construction plant.**

The contractor shall include in his tendered price and shall provide and install all necessary construction plant and shall use such methods and appliances for the performances of the operations connected with the work embraced under the contract as will secure a satisfactory quality of work and rate of progress which, in the opinion of the Corporation Engineer will ensure the completion of the work within the time specified. If at any time before the commencement, during the progress of the work or any part of it such methods or appliances appear to the Corporation Engineer to be insufficient or inappropriate for securing the quality of the work required or the said rates of progress, he may order the contractors to increase their efficiency or to improve their character, and the contractor shall comply with such orders, but the failure of the Corporation Engineer to demand such increase of efficiency or improvement shall not relieve the contractor from his obligation to secure the quality of work and the rate of progress required by the contract and the contractor alone shall be responsible for the efficiency and safety of his plant, appliances and methods.

It is however open to the Corporation Engineer to lend or supply to the contractor any tools, implement materials and machinery that the Corporation Engineer may consider desirable but for any such tools, implements materials and machinery that may be lent or supplied to contractor by Government the contractor shall may be so lent or hired to the contractor shall be the Regional Executive Engineer before the final bill or work is paid and any shortage or damage shall be such rate as may be determined by the Regional Executive Engineer after making such allowance as he may consider suitable for fair wear and tear.

### **34. Scaffolding instructions:**

All requisite scaffolding shall be provided at the contractor's expense and shall be double, i.e. it must have two sets of upright supports care must be taken to ensure the safety of the work people and the contractor must comply with such instructions as the Corporation Engineer may issue to ensure safety. The contractor will be entirely responsible for any damage or injuries to persons or property resulting from ill erected scaffolding, defective ladders, or otherwise arising out of his default in this respect. The contractor's attention is also invited to the "safety code".

### **35. Temporary structure:**

The contractor shall erect and maintain at his own cost temporary weather proof sheds at such places and in a

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manner approved by the Corporation Engineer for keeping materials under cover. The contractor shall also provide and maintain at his own expenses such temporary fences, guards, bridges and roads as may be necessary for the execution of his contract work or for safeguarding or accommodating the public if the Corporation Engineer shall order any departure he shall comply with such orders as the Corporation Engineer may issue to safeguard or accommodate the public, sheds for housing workmen shall be provided at the contractor's expenses if, in the opinion of the Corporation Engineer, such are necessary or desirable.

### **36. Water and lighting**

The contractor shall pay all teas and provide water and light as required from Regional Executive mains or other sources and shall pay all charges therefore (including storage tanks, meters, etc.) for the use of the work and workmen unless otherwise arranged and decided on, in writing with the Corporation Engineer. The water for the works shall be, so far as practicable, free from earthy vegetable, or organic matter and from salts or other substances likely to interfere with the setting mortar otherwise prove harmful to the work

### **37. Sun protection keeping dry and pumping**

The contractor shall at his own expense arrange all requisite protection of the work and materials against sun or rain effects and shall keep all portion of the work free from water to the satisfaction of the Corporation Engineer and shall use his own plant for the purpose unless otherwise specifically provided in the contract specification.

### **38 Tools and Seigniorage:**

The contractor shall, unless otherwise specifically stated in the tender notice and subsequently on this basis in the contract be responsible for the payment wherever payable of all import duties, tools octopi duties, seigniorages, quarry fees, etc., on all materials and articles that he may use.

The contractor shall be solely responsible for the payment of sales tax under the provision of the payment of sales tax under provision of the payment Sales Tax Act, 1939 (Madras Act IX of I 1939 as in force for time being and the rates for the various items of the work shall remain unaffected by any change that may be made from time to time in the rate at such tax is payable.

Notwithstanding anything contained in section 10 of the Indian Traffic Act of 1894, the rates for items involving, the use or supply of articles obtained by the contractor from outside India shall remain unaffected by any changes that may be introduced in Customs duties.

**NOTE: For works carried out on behalf of the Government of India, Seigniorage fees. etc., referred to in this clause will have to be levied in every case**

No Seigniorage shall be charged where due for materials quarried, from the P.W.D. or other Government quarries. Assistance as necessary will be given to the contractor by the department to obtain access to quarries approved by the Corporation Engineer. No plot rent shall be charged for materials stacked on the Government land during the course of construction provided all such materials are removed within one month after the work is completed.

Seigniorage charges due for use of private quarries and private land shall be paid by the contractor.

The contractor shall from his own approach road to the work site for which no extra will be due to him. On completion 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 the contract.

### **39. Setting out works:**

The contractor shall be responsible for the true and proper setting out of works and for the correctness of the position, levels, dimension and alignment of all parts of the works and for the provision of all materials, staff and labour in connection

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therewith.

**40. Cleaning up during progress and delivery:**

40.1. All rubbish shall be burnt or removed from the site, as it accumulates. All floors, stairs, landing windows, surface and soil drains shall be cleaned down and put in a thoroughly complete clean, sound and workman like state to the satisfaction of the Corporation Engineer having first been removed by the contractor. The contractor shall give notice in writing to the Corporation Engineer before the work is finally handed over all rubbish and surplus materials not required by the Corporation Engineer having first been removed by the contractor. The contractor shall give notice in writing to the Corporation Engineer when the work is so ready to be handed over and shall be responsible for its maintenance until it is taken over by the Corporation Engineer.

**F. RESPONSIBILITIES AND LIABILITIES OF THE CONTRACTORS.**

**41. Observance of laws, focal regulations and notices. Attachments:**

The contractors shall conform to the regulations and by-laws of any local authority and or of any water or lighting companies with those systems the structure is proposed to be connected and shall, before making any variations from the drawings or specification that may be necessitated by so conforming, given to the Corporation Engineer written notice, specifying the variations proposed to be made and the reasons for making them, and apply for instructions thereon. In case the contractor shall not receive such instruction within seven days. he shall proceed with the work conforming to the provisions regulating or by-law in question and any variations in the drawings or specification so necessitated shall be dealt with under clause.

The contractor shall give all notices required by the said Act, regulation or by-laws and pay all fees in connection therewith unless otherwise arranged and decided on in writing with the Corporation Engineer. He shall also ensure that no attachments are made against materials of work forming part of or for the use of the contract. In every case referred to in this clause the contractor shall protect and indemnify Government against any claim or liability arising from or based on the violation, of any such law ordinance, regulations order, degree, a attachment whether by himself or by his employees.

**42. Accidents - Hoarding - Lighting observation - Watchmen:**

When excavation have been made or obstacles have been put in public thorough fare or in places where there is any likelihood of accidents, the contractor shall comply with any requirement of law or the subject and shall provide suitable hoarding and watchmen necessary.

It shall be the contractor's sole responsibility to protect the public and his employees against accident from any cause and he shall indemnify Government against and claims for damages for injury to person or property, resulting from any such a claim and shall where the provisions of the Workmen's Compensation Act apply, take step to properly insure against any claims there under.

On the occurrence of accident which results in the death of any of the workmen employed by the contractor or which is so seriousness as to the likely to result in the death of any such workmen, the contractor shall, within 24 hours of the happening of such accident, intimate in writing to the concerned section officer of the Department the fact of such accident. The contractor shall indemnify Government against all loss or damage sustained by Government resulting, directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties of fines if any payable by Government as a consequence of Government's failure to give notice under the Workmen's Compensation Act

**or otherwise conform to the provisions of the said Act in regard to such accident.**

In the event of an accident in respect of which compensation may become payable under the Workmen's Compensation Act VIII of 1923 whether by the contractor or by the Government as principal it shall be lawful for the

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Corporation Engineer to retain out of money due and payable to the Contractor such sum or sums of money as may, in the opinion of the Corporation Engineer shall be final in regard to all matters arising under, this clause.

The contractor shall indemnify Government from and against all claims and proceedings for or on account of infringement of any patent rights, design, trade mark, or name of other protected rights in respect of any constructional plant, machine work or material used for or in connection with the works or temporary works, or any of them and from and against all claims, demands, proceedings, damages, cost, charges and expenses whatsoever in respect thereof in relation thereto.

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this agreement, the contractor shall comply with or cause to be complied with all the rules framed by the Government from time to time for the provision of health and sanitary arrangements to workers employed by P.W.D. and Highways and Rural Works Department and their contractors Vide Appendix. In case the contractor fails to make arrangements and provide necessary facilities as aforesaid the Corporation Engineer shall be at liberty to make arrangements and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this agreement, the contractor at his own expense shall arrange for the safety provisions as per "Safety Code" framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangements and provide facilities as aforesaid and recover the costs included in that behalf from the contractor.

In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this agreement the contractor shall arrange to furnish in triplicate particulars to each working the Performa Vide Appendix XXXVIII b) the end of every month to the Corporation Engineer charge of the work.

**43. Blasting:**

Blasting executed by contractors in connection with Government works shall be carried out in the manner described under "Blasting operations Instructions to Contractor of the TNBP.

- 44.** The contractor is to protect the whole of the adjoining and where necessary, the existing premises and all works and all fittings to all buildings or an adjoining the site against the structural and decorative damages caused by the execution of these works and make good in all respects all such damage done or occurring to the same, and leave such reinstatement in perfect order. He is also to make good any damage done to private footways or roadways.

**45. Permit other Workmen Co-operation Afford facilities:**

The Corporation Engineer shall have full power to send workmen upon the premises to execute fittings and other works not included in the contract for whose operations the contractor is to afford every reasonable facility during ordinary working hours, provided that such operations shall be carried on in such a manner as not to impede the progress of the work included in the contract, but the contractor is not to be responsible for any damage which may happen to or be occasioned by any such fittings or other works, provided he complies with the Corporation Engineer's instructions in connection therewith, and provided that the damage is not caused by himself or his workmen.

The contractor shall, at all times, cooperate, assist, attention, and afford facilities for such specialists as may be employed by the Corporation Engineer on other works in connection with the building, allowing them free of charge the use of all plant, light and water installed in the works. The contractor shall cause such special work or protect it as instructed to avoid injury during progress of the works. For failure so to protect, the contractor must make good any damage caused.

When two or more contractors are engaged on installation or construction work in the same vicinity, the Corporation Engineer shall have authority to direct the manner in which each shall conduct the work so far as it affects other contractors. :

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**46. Holes for water services, gas, electrical and sanitary fittings:**

**46.1. The contractor shall leave all holes in masonry and floors for the insertion of water services, gas and electrical connections and sanitary fittings in the exact positions indicated by the Corporation Engineer during the progress of the work. These holes must be properly built up in a workmen like manner at the contractor's cost, as soon as the fittings have been installed in cases, where the installations as made during the construction of the buildings and where in the opinion of the Corporation Engineer, delays in settlement of accounts will not thereby occur.**

**47. Contractor's risk and insurance:**

The work executed by the contractor under the contract shall be maintained at the contractor's risk until the work is taken over by the Corporation Engineer. The Govt. should not be liable to pay for any. loss or damages occasioned by (or) arising out of fire, flood,

**volcanic eruptions, earth quake or other convulsion of nature and all other natural calamities, risks arising out of acts of God during such period and that the option whether to take Insurance coverage or not to cover risks, is left to the contractor.**

Provided however, that the contractor, shall not be liable for all or any loss or damages occasioned by or arising out of acts of foreign enemies impassions hostilities or warlike operations (before or after declaration of war) rebellion military or usurped power.

**48. Holidays:**

, Subject to any provision to the contrary contained in the contract none of the permanent work shall save as herein after provided be carried on during the night or on Sundays and other holidays without the permission in writing of the Corporation Engineer or of the officer in charge of the work: save when the work is un avoidable or absolutely necessary for the save of life or property or for the safety of the works in which case the contractor shall immediately advice the Corporation Engineer.

**G. MISCELLANEOUS**

**49. Sand and gravel:**

**49.1. The contractor shall not make any excavations upon the site for the purpose of obtaining gravel, sand or soil other than that shown or implied by the drawings, except with the previous permission of the Corporation Engineer.**

**50. Old curiosities:**

**50.1. All old curiosities, relics, coins, minerals, etc., found in excavating or pulling down, shall be the property of the Government and. be handed over to the Corporation Engineer. Should any ancient masonry, or other old work of interest be opened up, the Corporation Engineer's attention shall be called to the same before demolition or removal.**

**51. Assignment or sub - lettings:**

**51.1. The contractor shall not without the written consent of the Corporation Engineer, assign the contract nor sub-let any portion of the same. Ordinarily no subletting will be permitted, but in case such should be permitted by the Corporation Engineer, it shall in no way free the contractor from any of his responsibilities under any clause of these "Conditions of Contract" or of the "Articles of agreement".**

**52. Specialties:**

**52.1. The Corporation Engineer, shall, during the progress of the work have powers to select,**

**-nominate or recommend tradesmen or specialists to supply material or execute such portion of the work as he may consider desirable in the interests of the Government.**

**53. Ratification of the orders of the Corporation Engineer**

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**53.1. Should the acceptance of the tenders be beyond the authorized powers of the Corporation Engineer as laid down in the P.W.D. code, the orders and decisions of such Corporation Engineer with regard to the employment of specialists for certain portion of the work as described in the previous clause will be subject to the ratification of the higher authority who accept the tender.**

**Powers for sanction of Extension of time:**

.A. Should the acceptance of tender beyond the authorized powers of the Corporation Engineer as laid down in TN P.W.D. code, the orders or decisions of such Corporation Engineers with regard to the extension of time for completing the contract will be subject to the ratification of Chief Engineer for all works for which tenders were accepted by the Chief Engineer.

**Powers for termination of LS contract.**

**53.1 .B. Should the acceptance of tender beyond the authorized powers of the Corporation Engineers laid down in TN P.W.D. code, the orders and decision of such Corporation Engineers with regard to the termination of contract will be subject to ratification of the Chief Engineer for all works for which tenders were accepted by Chief Engineer.**

**54. Order Book.**

An order book shall be kept at the Regional Executive office on the site of the work. As far as possible, all orders regarding the work are to be entered in this book. All entries shall be signed and dated by the Regional Executive officer in direct charge of the work and by the contractor or by his representative. In important cases, the Corporation Engineer will countersign the entries, which have been made. The order book shall not be removed from the work except with the written permission of the Corporation Engineer.

No photographs' of the site or of the work of any part thereof shall be taken except with the permission in writing of the Corporation Engineer and no such photographs shall be published or otherwise circulated without the permission, of the Chief Engineer.

**H. DATE OF COMMENCEMENT, COMPLETION, DELAYS, EXTENSION, SUSPENSION OF WORK AND FORFEITURE.**

**55. Date of Commencement and completion:**

**55.1. On notification of possession of the site (or premises) being given to the contractor by letter registered for acknowledgement as provided in clause**

**9.1. supra, he shall forthwith begin the work, shall regularly and continuously proceed with them, and shall complete the same (except for painting or other work which in the opinion of the Corporation Engineer, it may be desirable to delay) by the date of completion, as defined in the "Articles of Agreement subject nevertheless to the provisions of extension of time mentioned in the next clause. The contractor shall under no circumstances be entitled to claim any damages from Government if he incurs any expenses or liabilities to payment under the contract before the date of commencement defined above. The contractor shall have the right to withdraw from the contract and obtain refund of his security deposit if such intimation of handing over the site is delayed by more than two months from the date of acceptance of the agreement by competent authority.**

**56. Delays and extension oft/me:**

No claim for compensation on account of delays or hindrances to the work from any cause whatever shall lie except as hereinafter defined.

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**Reasonable extension of time will be allowed by the Corporation Engineer or by the officer competent to sanction the extension for unavoidable delays, such as may result from causes which in the opinion of the Corporation Engineer are undoubtedly beyond the control of the contractor. The Corporation Engineer shall assess the period of delay of hindrance caused by any written instruction issued by him at twenty five percent in excess of the actual working period so lost. If at any time the Corporation Engineer is of the opinion that there has been avoidable delays and the contractor fails to maintain the "rate" of progress specified in the article of agreement, it shall be lawful for the Corporation Engineer to impose penalty or order forfeiture from the Deposit sanction the extension of time for such delays, provided however, the penalty and forfeiture shall be governed as per clause 51.2 and 51.3.**

In the event of the Corporation Engineer failing to issue necessary instructions and thereby causing delay and hindrance) the contractor the latter shall have the right to claim an assessment of such delay by the Corporation Engineer of the Office. The contractor shall lodge in writing to the Corporation Engineer a statement of claim for any delay hindrance referred to above within fourteen days from its commencement, otherwise no extension of time will be allowed.

Whenever, authorized alterations or additions made during the progress of the work are of such nature in the opinion of the Corporation Engineer as to justify 8" extension of time in

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**consequence thereof, such extension of time will be granted in writing by the Corporation Engineer or other competent authority when ordering such alteration or additions.**

**57.** Delays in commencement or progress or neglect of work or suspension of works by the contractor and forfeiture of Earnest Money, Security Deposit and withheld amount.

Time shall be considered as the essence of the contract. If at any time the Corporation Engineer, shall be of the opinion that the contractor is delaying commencement of the work, neglecting or delaying the progress of work as defined in the tabular statement... Rate of Progress in the Article of Agreement or the contractor fails to maintain the Rate of Progress in the Articles of Agreement plus any CA tension of time or the contractor shall suspend the works.. or sublet the work or d portion thereof without the sanction of the Corporation Engineer or violates any of the provisions of the contract the Corporation Engineer shall so advise the contractor and at the same time demand compliance. If the contractor neglects to comply with such demand within seven days after receipts of such notice, it shall then or at any time be awful for the Corporation Engineer to impose a penalty or forfeiture on this contractor from the deposit or to determine the contract.

The penalty or forfeiture referred to in Clause

**57.1. shall not exceed 10% of the work executed and is imposed in cases where the contractor is allowed to proceed with the whole or part and complete the whole or such part of the works. The penalty or forfeiture imposed by the Corporation Engineer under this clause is however subject to modification or waiver at the absolute discretion of any authority higher in rank than the Corporation Engineer.**

**57.3. It shall be a further right of the Corporation Engineer to give any port of the work to any other contractor at his discretion or have it done departmentally in order to maintain the rate progress and the contract shall then be determined for only that portion of the work given to the contractor or done departmentally. The for feature under clause**

**57.2. will in these circumstance be applied any excess expenditure incurred on this account shall Le recovered from the original contractor.**

Determination of the contract referred to in Clause 47." shall carry with it the forfeiture at the Security [deposit. After determining the contract, the Corporation Engineer shall have the right to give any part of the work to any other contractor in the unexecuted portion of contract, in which case any expenses which may be incurred in excess of such amount which would have been paid to the original contractor if the whole work had been executed deducted from any money due to him by Government it under this contract or any other account what so ever. Provided, also that if the expenses incurred by the Government are less than the amount payable to the contractor at his agreement rates the difference will not be paid to the contractor.

In the event of anyone of the above clauses being adopted by the Corporation Engineer,

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**the contractor shall have no compensation for any loss sustained by him reason of his having purchased or processed any materials or entered into any engagements or made any advances on account or with a view to the execution of the work art h e performance of contract, and in case action is taken under any of the provisions aforesaid, the contractor shall not be entitled to be paid any sum for any work actually performed under the contract unless and until the Corporation Engineer has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid' the value so certified.**

In the event of the Corporation Engineer putting in force oil or any of the powers vested in him under the clause57.4. he may if he so desires after giving a notice in writing to the contractor take possession of the works, and site and such plants and materials thereon (or any ground contiguous thereof) and all such plant and materials as above mentioned shall thereupon be at the disposal of Government absolutely for the purpose of completing the work. After such notices shall have been given, the contractor shall not he at liberty to remove from the site or works of from the ground continuous thereto any plant or materials belonging to him which shall have been placed thereon for the purpose of the above work. Government shall not be liable to make any payment to the contractor on account of use such plant for the completion of the works, under the provisions herein before contained. On taking possession of the materials and stores belonging to the contractor or procured by the contractor and intended to be used for the execution of the work or any part thereof the contractor rates to be certified there of shall be final.

**Otherwise, the Government may give notice in writing to the contractor to remove any of his plant or materials from the site and not required or any completion of the works, if such plant and or materials are not removed within fourteen days after notice, shall have been so given, Government may remove and sell the same, holding the proceeds less the cost of removal and sale, to the credit of the contractor. The expense, of any such removal and the amount of the proceeds and expense of any such sale. shall be final and binding on the contractor.**

## **I. PARTICULARS OF PAYMENT**

### **58. Payment of lump sum basis or by final measurement lit unit prices:**

Final measurements need not be taken unless either the contractor or the Corporation Engineer claims extras to or deductions from, the quantities of Schedule A,

In case final measurements are claimed, they shall be taken only for those items for which either the contractor or the Corporation Engineer claims final measurements and the quantities of the remaining items in Schedule. A shall be accepted as correct. The lump sum amount mentioned in the agreement will then be varied by adding thereto or deducting there from as the case may be, the difference if any between the amounts mentioned in Schedule A for such items and the amounts arrived at by calculation at contract rates based on the revised quantities for the same, obtained by the final measurements aforesaid.

It shall be accepted as a condition of the contract that the payment of the final bill to the contractor less the withheld amounts and his acceptance thereof shall constitute a full and absolute release of Government from all further claims by the contractor under the contract.

### **59. Payment for additions and deductions for omissions.**

No authorized variation shall vitiate the contract, but additions and omissions shall be measured up and dealt with in accordance with clause

If there is no rate in Schedule' A ' for additional work ordered to be carried out by the Corporation Engineer, when prior to execution of the additional work, shall be worked out in accordance with the methods indicated in 59.3 and

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with the rate agreed upon a supplemental agreement shall be entered in the proper department!! form signed and dated by the contractor and the Corporation Engineer and or any other officer for the time being authorised to accept such agreement and supplemental agreement shall on such acceptance form part of the original agreement. A copy of the supplemental slip shall be given to the contractor.

The rate for additional works shall be derived from the rate for similar items of work in the accepted agreement, In the case of works for which supplemental agreement is to be entered into during the period when the schedule of rates has not changed from the date of execution of the original agreement, then the rates for supplemental agreements may be the prevailing schedule of rates plus or minus tender premium in case the rates cannot be derived from the items in the original agreement, in other case where the schedule of rates has change in the intervening period, the rates prevailing as per the schedule of rates at the time of execution of supplemental items will be adopted with no tender premium over this rate.

If the rate for a particular item of work is not in the schedule of rates, the prevailing market rates when the work was done shall be adopted.

If the rates cannot be determined as above, the rates shall be fixed on the cost of

**labour and materials plus 10 percent thereon, provided the vouchers shall have been delivered to the Corporation Engineer within 7 days after such work is completed. if the Corporation Engineer considers that the vouchers are unduly high, the Corporation Engineer can evaluate work as reasonable and fair and make payment if the value of payment is less than Rs.1,000. If the value of additional payment exceeds Rs.1,000 the contractor shall have the right to submit the matter to arbitration.**

In cases where the Government under the terms of the contract with the contractor are liable to supply and materials, articles or things to the contractor for the performance of his part of the contract, the Corporation Engineer, may at his absolute discretion extend the time which such materials, articles or things may be supplied by the Government and the Government may supply to the contractor such materials, articles or . timings within the time so attended without any liability on their part to compensate the contractor by reason of the extension of time for the supply of the materials, articles or things.

In cases where the Government under the terms of the Contract are liable to supply any materials, articles or things to the contractor for the performance by him of his part of the contract and the Government for any reason are unable to supply such materials, articles or things either within the time specified in the contract or within the time extended under clause 59.A. the Corporation Engineer may at his discretion or at the request of the contractor determine the whole or any part of the contract which cannot be performed by reason of the failure to supply such materials, articles or things and the contractor shall not be entitled to claim any damages or compensations in respect of such determination. The contractor shall, however, be paid the value of the work already done by him and the cost of the materials, articles or things if any collected by him upto the date of such determination and left unused on the work- on shall be taken over by the Corporation Engineer either at the contract rates or at values deduced from the through rates deduced in the contract. When the contract is determined at the discretion of the Corporation Engineer, he shall give notice in writing to the contractor and the decision of the Corporation Engineer to determine the contract shall be final and bind on the contractor.

#### **EXPLANATION:**

**The expression "Through rates' means the rate for the finished items of work or the all in rates, that is to say, the rates for finished items of work inclusive of the cost of materials and labour.**

if, at any time after the acceptance of the tender the Government shall, for any reason whatso ever, not require the

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whole or any part of the work to be carried out, the Corporation Engineers shall give notice in writing of the fact to the contractor. Who shall have no claim to any compensation or other payments whatsoever, who shall on account of any profit or advantage he might have derived from the execution of the work in full but which he did not derive in consequence of the termination of the works. He shall be paid at contract rates, for the work executed by him including any additional works such as clearing of site etc. that may be rendered necessary by such termination. He shall also be allowed a reasonable payment as decided by the authority next higher in rank to the authority which accepted the tender, for any expense incurred by him on account of labour and materials, articles or things collected, but which could not be utilized on the works as verified by the Corporation Engineer. Such decision shall be final and binding on both the parties and shall not be subject to arbitration under clause 73.

**60. No payment for unsanctioned extras:**

**60.1. It shall be distinctly understood that no payment whatever will be made to the contractor for variations by way of extras, in cases where such variations have been made without the written sanction of the Corporation Engineer.**

**61. Accounts Receipts and Vouchers;**

**61. The contractors shall at any time upon the request of the Corporation Engineer furnish him with all invoices; account, receipts and other vouchers that he may require in connection with the contract.**

**62. Fraud, willful neglect or default:**

**62.1. No final or other certificate of payment or completion, acceptance or settlement of account shall, in any circumstances, relieve the contractor from his liability for any fraud, or willful neglect or default in the execution of the contract or any willful or unauthorized deviations from drawings, specification, instructions and directions for the time being binding upon him.**

**63. Unfixed materials:**

**63.1. No payment or advance will be made for unfixed materials when the rates are for finished work in site.**

**64. Payments and certificates:**

Payments will be made to the contractor under the certificates to be issued at reasonably frequent intervals by the Corporation Engineer, within 14 days of the date of each certificate an intermediate payment will be made by the Corporation Engineer of a sum equal to 95 percent of the value of work as so certified and the balance of 5% will be withheld and retained as security for the due fulfillment of the contract.

**Under the certificate to be issued by the Corporation Engineer on the completion of the entire works, the contractor will receive the final payment of all the moneys due or payable to him under or by virtue of the contract except security deposit and the withheld amount equal to 2 1/2 percent of the total value of the work done provided there is no recovery from or forfeiture by the contractor to be made under clause 57. The amount withheld from the final bill will be retained under. "Deposits" and paid to the contractor together with the Security**

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Deposit after six months reckoned from the date of completion of work or as soon after the expiration of such period of six months as all defects shall have been made good according to the true intent and meaning thereof whichever shall last happen, in the event the final bill remains unpaid even after the period of six months before said, the Corporation Engineer shall refund the security deposit which includes the E.M.D. and also the withheld amount on a separate bill if requested or by the contractor in writing. No certificate of Corporation Engineer shall be considered conclusive evidence as to the sufficiency of any work or materials or correctness of measurements to which is not related nor shall it relieve the contractor from his liability to make good defects as provided by the contract. The contractor when applying for a certificate shall prepare a sufficiently detailed bill based on the original figures of quantities and rates in the contract scheduled to the satisfaction of the Corporation Engineer, to enable the Corporation Engineer to check the claims and issue the certificate. The certificate as to such of the claim mentioned in the application as are allowed by the Corporation Engineer shall be issued within fourteen days of the application. No application for a certificate shall be made within fourteen days of a previous application.

64.1 .A. Notwithstanding the above clause, the withheld amount of 2 ½ % from the final bill in respect of contract for construction of original building, will be retained by the Govt. for a total period of one year in lieu of six months period referred to in clause.

64.1 .B. and will be released after the expiry of one year period on execution an indemnity bond by the contractor to the satisfaction of the Corporation Engineer for a further period of four years to ensure structural stability of the building under clause 26.1.A.

(G. O. MS. No. 181 PWD 28.1 .86)

64.2. When there are complaint from the Labour Department about non-payment of wages to the Labourers employee by the Contractors for the execution of work under agreement, the Corporation Engineer, shall have full powers to withheld the bills claimed by the contractor pending clearance certificate from the Labour Department and to act as per the direction given by the Labour Department.

65. Interest and money due to the contractors:

65.1. No omission by the Corporation Engineer to pay the amount due upon certificate. shall vitiate or make void the contract nor shall the contractor be entitled to interest upon any guarantee fund or payments in arrears, not upon any balance which may, on the final settlement of his accounts, be found to be due to him.

66. Acceptance of final measurements:

66.1. The contractor agrees that before payment of the final bill shall be made on the contract, he will sign and deliver to the Corporation Engineer either in the measurement book or otherwise as demanded? valid release and discharge from any and all claims and demands whatsoever for all matters arising out of or connected with the contract and also

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produce a certificate from the Incomes tax Authorities that all income tax payable by him upto-date has been duly paid provided that nothing in this clause shall discharge or release the contractor from his liabilities under The contract. It is further expressly agreed That Corporation Engineer in supplying the final measurement certificate need not be bound by the proceeding measurements and payments. The final measurements, if any of the Corporation Engineer shall be final conclusive and binding on the contractor.

**67. Recovery of money from contractor in certain case.**

**67.1.** In every case in which provision is made for recovery of money from the contractor. Government shall be entitled to retain or deduct the amount thereof from any money that may be due or may become due to the contractor under these presents and or under any other contract or contracts or any other account what so ever.

**67. A. Recovery under Revenue Recovery Act:**

Whenever any amount has to be paid by the contractor in view of determination of the contract by virtue of clause 57 (4) or any amount that may be due or may become due from the contractor under these presents and the contractor not responding to the demands for the payment of the said amount, then the Govt., shall be entitled to recover the said amount under the provisions of the Revenue Recovery Act. (G. O. Ms. No.3659 PWD 23.12.70)

**68. Contractor dying becoming insolvent, insane or imprisoned:**

In the event of the death or insanity or insolvency or imprisonment of the contractor or where the contractor being a partnership or firm 'becomes dissolved or being a corporation goes in to liquidation, voluntary or otherwise, the contract may at the option of the Corporation Engineer, be terminated by notice in writing posted at the site of the works and advertised in one issue of the local district Gazette and all accepted and acceptable works shall forthwith be measured up and paid for at the rates provided in the contract schedule where such apply, or otherwise, by most recent schedule 0 rain of the division approved by competent authority '0 the person or persons entitled to receive and give a discharge for the payment.

**J. SETTLEMENT OF DISPUTES**

**69. Arbitrations:**

**69.1** In case of any dispute or difference between the parties to the contract either during the progress or after the completion of the works or after the determination, abandonment or breach of the contract, or as to any matter or thing arising there under except as to the matters left to the sole discretion of the Corporation Engineer under clauses 18, 20, 25, 3, 27, 34, 35 and 37 of "General conditions of contract" or as to the withholding by the Corporation Engineer of payment of any bill to which the contractor may claim to be entitled, the either party shall forthwith give to the other notice of such dispute difference and such dispute or difference shall or be and is hereby referred to the Director of Regional Executive Administration of the nominated Regional Executiveity mentioned in "Articles of Agreement" therein after called the "Arbitrator" in cases when the value of claim is less than & upto Rs.50000. In cases when the value of claim is more than Rs.50000 the parties will seek remedies to the competent civil courts. (G.O.Ms.No.253 pass 24.9.81) The Arbitrators shall give detailed reasons in their findings and conclusion (G.O.Ms.No.1 844 pass off 18.7.86)

Subject as aforesaid to the provisions of the arbitration Act, 1 940, or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the Arbitration proceeding under this clause.

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Upon every and such reference, the costs of and incidental to the reference and award respectively shall be discretion of the arbitrator. Subject to the condition that the amount of such costs to be awarded to either party shall not, in respect of a monetary claim exceed the percentage set out below of any such award irrespective of the actual fees, costs and expense incurred by either party provided that where a monetary claim is disallowed in full they said percentage shall be calculated on the amount of the claim. The arbitrator may determine the amount of the costs to be awarded or direct the same to be taxed as between solicitor and client or as party and shall direct by whom and to whom and in what manner the same shall be borne and paid.

The fees for arbitrators shall be levied based on the value of claims referred to for arbitrations. The fees shall be calculated at 5 percent of the first Rs.10000/- and 3 percent of the next Rs. 40000/- (G.O.Ms.No. 1844 pms dt 18.7.86)

Provided that the Government shall not be liable to any claim in respect of any such dispute or differences until the liability and the amount thereof shall have been referred to and decided by the Arbitrator

#### **APPENDIX -1**

##### **PUBLIC WORK DEPARTMENT SAFETY CODE**

###### **General Rules as to Scaffolds.**

- 1 . Suitable scaffolds shall be provided for workman for all works that cannot be safely done from a ladder or by other means. When a ladder is used an extra Mazdoor shall be engaged for holding the ladder and the ladder shall be given an inclination not steeper than 0.25 to 1 (0.25 horizontal to 1 vertical) when the ladder is used for carrying materials as well, suitable foot holds and hand holds shall be provided on the ladder.**
- 2. A scaffold shall not be constructed, taken down or substantially altered except (a) under the supervision of a competent and responsible person; and (b) as far as possible by competent workers possessing adequate experience in such work.**

###### **All scaffolds and appliances connected therewith and all ladders shall**

- a) be of sound materials
  - b) be of adequate strength having regard to the load strain to which they will be subjected and
  - c) be maintained in proper condition
- 4. scaffolding or staging more than 3.5 meters above the ground or floor shall have a guardrail properly attached bol-braced and otherwise secured at least 0.9 meters above the floor or platform of such scaffolding or staging extending along the entire length of the outside and ends thereof with only such opening as may be necessary for delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.**
  - 5. Scaffolds shall be so constructed that no part thereof can be displaced in consequence of normal use**
  - 6. Scaffold shall not be overloaded and so far as practicable the load shall be evenly distributed.**
  - 7. Before installing lifting gear of scaffolds special precautions shall be taken to ensure the strength and stability of the scaffolds.**
  - 8. Working platform, gangways and stairways should be so constructed that no part there can be unduly or unequally. If the height of the platform or the stairways is more than 3.5 meters above ground level or floor level they should be closely boarded, should have adequate width and should be suitably fenced as described in (4 above)**
  - 9. Every opening in the floor of a building or in a working platform shall be provided with suitable fencing or railing for a minimum height of 0.9 meter to prevent the fall of persons or material.**

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10. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 meters in length while the width between side rails in rung ladder shall in no case be less than 30cm for ladder upto and including 3 meters in length. For longer ladders this width should be increased at least 20mm for each additional meter of length uniform step spacing should not exceed 30cm. Adequate precautions should be taken to prevent danger from electrical equipment. No materials on the site of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the Public from accidents and shall be bound to bear the expenses of defense of every suit, action or other proceedings at law that may be brought by any persons for injury sustained owing to neglect of the above precautions and to pay any damage and cost which may be awarded in any such suit, action or proceedings to any cost which may with the consent of the contractor be paid to compromise any claim by any such person.

**Excavation and trenching:**

11. Trenches-1.2 meters or more in depth, shall at all times be supplied with at least one ladder for each 20 meters in length or fraction thereof. Ladder shall be extended from bottom of the trench to at least 0.6 meter above the ground. The sides of the trenches which are 1.5 meters or more in depth shall be stepped back to give suitable slope or hold securely by timber bracing, so as to avoid the danger of sides to collapse.

12. Demolition-Before any demolition is commenced and also during the process of the work.

- a) All roads and open areas adjacent to the work site shall either be closed or suitably protected.
- b) No electric cable or apparatus used by the operator shall remain electrically charged.
- c) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

13. All necessary personal safety equipment as considered adequate by the Corporation Engineers shall be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned.

- a) Workers employed on mixing asphalted materials cement and lime mortars- shall be provided with protective footwear and protective goggles.
- b) Those engaged in wheel-washing and mining or stacking of cement bags or any material which is injurious to the eyes shall be provided with protective goggles.
- c) Those engaged in welding works shall have provided with welder's protective 513-'195.
- d) Those engaged in welding works shall be provided with welder's protective 513-'195.
- e) When workers are employed in sewers and man holes, which are in use, the contractor shall ensure that the manholes covers are opened and are ventilated at least for an hour before the workers are allowed to get into them and holes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public.
- f) The contractor shall not employ men below the age of 18 years and women on the work of painting, with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precautions shall be taken.
- g) No paint containing lead products shall be used except in the form of paste or ready - made paint,
- h) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.

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- i) Overalls shall be supplied by the contractors to workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work
- j) When workers are employed in dangerous occupations like work with hot bitumen, drilling operations etc., which are likely to prove dangerous resulting in physical damage and casualty, adequate protection of the workers should be provided.

14. When the work is done near any place. Where there is risk of drawing all necessary equipments should be provided and kept ready for use and all necessary equipments steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatments of all injuries likely to be sustained during the course of the works

**15.a) Hoisting machines and tackle including their attachments anchorages and supports shall be good mechanical construction, sound materials and adequate strength and free from patent defect and shall be kept in good repair and in good working order. Every rope used in hoisting or lowering materials or any means of suspension shall be of suitable quality and adequate strength and free from patent defect.**

b) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in control of any hoisting machine, including the scaffold which or give signals of the operator,

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

16. Motors, gearing, transmissions, electricity wiring and other dangerous parts of hoisting appliance shall be provided with efficient safeguards, Hoisting appliance shall be provided with such means as will request to a minimum the risk of the accidental descent of the load.

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

**When workers are employed on electrical installations which are already energized, insulation mats, wearing apparel such as gloves, sleeve, and boots as may be necessary should be provided. The workers and carry keys or other materials which are good conductors of electricity.**

17. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at workshop. The person responsible for the compliance of the safety code shall be named by the contractor.

18. To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangements made by the contractor shall be open to inspection by the Labour Officer, Corporation Engineer of the Department or other representative.

19. Notwithstanding the above clauses (1) to (18.) there is nothing in these to exempt the contractor from the operations of any other Act of rules in force in the Republic of India.

**Model rules for provision of Health and Sanitary arrangements for workers employed by the P.W.D. and Highways and Rural Works Department and their contractors.**

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**The contractor's special attention is invited to relevant clauses of the "General conditions of control" in the Tamil Nadu Building Practice and he is requested to provide at his own expense the following amenities to the satisfaction of the Corporation Engineer.**

1. Application - These rules shall apply to all building and construction works in charge of Managing Director.

2. Definitions-

- (i) "Workplace" means a place at which an average fifty or more workers are employed in connection with construction work.
- (ii) "Large work place" at which, at an averaged 500 or more workers are employed in connection with construction work.

3. First-Aid –

**(a) At the work site there shall be maintained in a readily accessible place, first aid appliance and medicines including an adequate supply of sterilized dressing and sterilized cotton wool. The appliances shall be kept in good order. They shall be placed under the charge of a responsible person who shall be readily available during working hours**

b) At large work places, where hospital facilities are not available within easy distance of the works, first aid posts shall be established and be run by a trained compounder.

c) Where large work place are remote from regular hospitals an in-door ward shall be provided with one bed for every 250 employees.

d) Where large work places are situated in cities, towns or in their suburbs and no beds are considered necessary owing to the proximity of city or town hospitals, suitable transport shall be provided to facilitate removal of urgent cases to these hospitals. At other work

**places some conveyance facilities, such as a car shall be kept readily available to take injured persons or persons suddenly taken seriously ill to the nearest hospital.**

4. Drinking water

**(a) Water of good quality fit for drinking purposes shall be provided for the work people on a scale of not less than 15 litres per head per day**

b) Where drinking water is obtained from an intermittent 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 than 15 meters from any latrine, drain or other source of pollution.- Where water has to be drawn from an existing well, which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and water proof.

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

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

6. Latrine and Urinals-There shall be provided within the precincts of every work place, latrines and urinals in an accessible place and the accommodation separately for each of them, shall be on the following scale or on the scale so directed by the Corporation Engineer in any particular cases.

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- i) Where the number of persons employed does not exceed 50.
- ii) Where the number of persons employed exceeds 50 - 3 but does not exceed 100.
- iii) For every additional 100 -3

**If women are employed separate latrines and urinals, screened from those for men shall be provided on the same scale.**

**Except in work places provided with water flushed latrines connected with a water borne sewage system, all latrines shall be provided with receptacle on dry earth system which shall be cleaned at least four times daily and at least twice during the working hours and kept in strictly sanitary conditions. The receptacles shall be tarred inside and outside at least once a year.**

**The excreta from the latrines shall be disposed off at the contractor's expense, in the way pits approved by the local Public Health Authority. The Contractor shall also employ adequate number of scavengers and conservancy staff to keep the latrines and urinals in a clean condition.**

7. Shelters during rest: At every work site there shall be provided, free of cost, two suitable sheds one for meals and the other for rest separately for men and women for the use of labourer.

8. Creches: (a) 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 the age of 6 years, belonging to such women, one hut shall be used for infants, games and play and the other as their bed room. The huts shall not be constructed on a lower standard than the following:

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

**The huts shall be provided with suitable and sufficient opening for light and ventilation. There shall be adequate provision of sweepers to keep the places clean. There shall be two attendance Sanitary utensils shall be provided Health Officer of the area concerned. The use of the huts shall be restricted to children, their attendants and mothers of the children.**

b) Where the number of women workers is more than 25 but less than 50, the contractor shall provide at least one hut and one Dai to look after the children of women workers.

c) The size of creche or creches shall vary according to number of women workers.

d) The creche or creches shall be properly maintained and necessary equipment like toys, etc. shall be provided.

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

10. Sheds for Workmen - The contractor should provide at his own expense sheds for housing his workmen. These sheds shall be on a standard not less than the cheap shelter type, to live in which the work people in the locality are accustomed to.

**A floor area of about 1.8 meters x 1.5 meters for two persons shall be provided. The sheds to be in rows with 1.3 meters clear space between sheds and 9 meters clear space between rows if conditions permit. The work people's camp shall be laid out in units of 400 persons, each, each unit to have a clear space of 12 meters all-round.**

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APPENDIX IX. XXXVIII

MONTHLY REPORT OF CONSTRUCTION EMPLOYEES UNDER CONTRACTORS

Return for the Month Ending

- 1 Name location and type of work
- 2 Name of contractor
- 3 Works engaged in

ii) Government work other than  
Managing Director

iii) Other works

4. Name and address of  
Manager(s) of works

5. Value of Contract

6. Employment earnings

**Employees**

Category	Men	Women	Girls
Boys			
(1)	(2)	(3)	(5)
( 4)			

i) Total number of employees  
during the month

ii) Number of employees in the  
work on the last working  
day of the month

iii) Total wages paid for the

iv) Total number of working  
days during the month

v) Length of normal wage period.

1. The Employment officer  
District Employment Office

2. The Corporation Engineer  
Division

**Instruction to complete the Performa**

1. Contractor means the person who has  
contracted execute the works

2. Manager means any person who manages,  
supervises the works on behalf of the contractor

3. Item (i) the cumulative total of daily  
employment on all days in a calendar month if the  
last day of the calendar month is a holiday, the  
working day immediately precious to the holiday.

**Item 6. (ii) wages means basic wage,  
dearness  
allowance, project allowances etc.,  
including work  
benefits paid in cash or kind**

Item 6. (iii) Columns 2 and 3 refer to adults who  
are 18 year of age or over

Item 6 - Column 4 and 5 refer to others not  
covered by columns 2 and 3

4. Returns should cover a calendar month

5. Completed returns to reach the employment  
exchanges concerned on or before the 5th of the  
month  
succeeding the month to which he return  
relates.

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## ADDITIONAL CONDITIONS

1. Departmental supply of the Materials : Nil

### 2. Centering works

Payments for centering works for all RCC items shall be made only after concrete is laid, even though separate rate is called for centering work in the schedule.

### 3. Concrete for RCC works

All cement concrete for RCC works shall be machine mixed and vibrated.

### 4. Special conditions for earthwork excavation in hard rock requiring blasting:

In the case of earth work excavation in hard rock requiring blasting the tender should observe the following conditions.

The blasted rock shall be compactly stacked for measurement. The net quantity of blasted rock shall be arrived at by allowing a deduction of 40% for voids and compared with the premeasured quantity and only the lesser of the two shall be paid.

Where the rock other than hard rock and hard rock are mixed upon ground the two kinds (if rocks shall be separately for measurement. The total of the net measurement of the two kinds of rock shall be arrived at by applying 40% deduction for voids. The total of the net measurement of two kinds of rock shall be compared with the premeasured quantity and only the lesser of the two shall be paid for. If the total of net measurements of the two kinds of rock exceeds (or) falls short of the measurements of mixture, the volume of mixture proposed to be paid shall be apportioned in the proportion of the net actual measurements

or stacks of the two kinds of rocks.

Payment for 'earthwork for embankment will be made excluding the quantity of pebbles and boulders and other such materials which shall not normally be used along with earth for formation of bund.

#### NOTE:

- i. 40% deduction for voids shall be adopted for compact and proper stacking but such percentage of deduction shall be: increased for loose (or) improper stacks.
- ii. The blasted rock material, stacked, measured and paid for shall become the property of the department.
- iii. I. S. Code No. 1200 (Part 1) IS 909 method of measurement of buildings and Civil Engineering of work, Part I "Earthwork" may be referred to as and when necessary.

### 5. Employment of Technical Assistant:

For more than one work: One technical assistant be employed by the contractor for more than one work situated within one kilo meter, provided that monetary limit prescribed for the nature of Technical staff to be employed is adhered to be one and the same contractor..

Other Engineering qualification:

The contractors who possess a degree in mechanical or chemical engineering may also have to appoint technical assistants as in the case of registered contractors with degree in electrical engineering, when they are entrusted with civil works by the department.

1. Painting with two coats of best white paint (or any other coloured approved by the Corporation Engineer) over a priming of red lead to all flushing tanks, brackets, clumps used for fixing pipes and all other connections.

2. The rates shall all included dismantling, making holes on walls, on slabs and restoring the structure to the original conditions after the completion of the work.
3. The contractor should employ sufficient number of qualified licensed plumber with necessary experience and skill in the to the satisfaction of the Corporation Engineer concerned for execution of water supply arid sanitary items of work.
4. The water for the works shall be as for as practicable from earthing vegetable or organic matter and from salts or substance likely to interfere with the setting of mortar proveharmful to the work.
5. All items of work shall be- done in accordance with relevant clauses of TNBP and addenda volume to the TNBP as from time to time
6. The contractor shall be responsible for the safe custody of the departmental materials once they are handed over to the Contractor at the departmental stores. The cost of any material the custody of the Contractor lost, stolen, destroyed or damaged or if rendered unfit for the work will be recover from the Contractor at the issue rate.
7. For testing the concrete and aggregate the Contractor procure the following equipments and make them available.
8. Steel mould for making 1 5 cm cubes of concrete (The mould be in two halves for easy removal).
9. Slum cone for testing consistency (Slum test) the cone will be 30cm height with top and bottom diameters of 10 cm and 50 cm in length. In addition a steel rod I 5cm dia and 50cm in length and with tamping and rounded is to be procured.
10. For finding finess modules sand and coarse aggregate a hand operated sieve apparatus may be procured along with weighing machine for weighing the aggregate and sand. In the case of any breach of the terms of the contract, the contract will be closed at the risk and costs of the Contractor in addition to the forfeitures of the EMD and SecurityDeposit.
11. The testing is to be done at the Contractor's cost for all building materials and also for concrete cubes.
12. The work shall be executed and measured as per metric dimension given in the schedule of quantities 6 drawing etc., (F.P. Units where indicated are for guidance only).
13. Unless otherwise specified P.I' the rates quoted by the Contractor shall be for works at all levels of the buildings.
14. Rates for every item of works to be done under this contract shall be for all lifts and leads, heights, depths, length and 'widths except when specifically mentioned in the item, otherwise nothing extra will be paid on this account.
15. The work shall be carried out as per drawings and designs supplied by the Departmentand as directed by Engineer-in- Charge.
16. The rate for all item in which use of cement is involved is inclusive of charges for curing.
17. The Contractor has to make his own arrangements for procuring water for construction purpose construction and curing should 1)- done with water free from injurious amounts of deleterious materials, potable water are generally considered, satisfactory for curing and fixing concrete and masonry. However the water tube used should be periodically tested at Contractors cost for its suitability for using in the construction work and got approved from Department Engineers.
18. 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.,
19. Any damage to work resulting from rains or from any other cause until these work is takenover by the Department after completion will be made good by the contractor at his own cost:



# **“A” SCHEDULE**

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## "A" Schedule

**Ref. No. :- E 6 / Est. No. 690 / 21-22 (5th Call)**

**NAME OF WORK:** -Construction of Urban Health Wellness Centre (UHC) Balarengapuram UPHC Location at East Madurai Station Road in ward -44 (Old Ward No – 71)

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
1	36	M <sup>3</sup>	Earth work excavation for foundation in Hard stiff clay, stiff black cotton, hard red earth, shales murram, gravel, stoney earth and earth mixed with small size boulders SS.20B and Sand, silt or other loose soil, wet sand, or silt not under water, light black cotton soil, sandy loam ordinary soil and to full depth as may be directed except in hardrock requiring blasting inclusive of shoring shuttering and baling out water and cleaning and levelling the site etc., complete 10 cum	1	M <sup>3</sup>		
2	45	M <sup>3</sup>	Supplying and filling in foundation and basement with filling Quarry Dust in layers of not more than 15cm. thick well rammed watered and compacted etc., complete complying with standard specification.	1	M <sup>3</sup>		
3	14	M <sup>3</sup>	Refilling with excavated earth in layers of 30 cm watered well rammed and consolidated conforming to standard specification including labour charges as directed by Engineer in Charge	1	M <sup>3</sup>		
4	3	M <sup>3</sup>	Plain Cement Concrete 1:4:8 (one cement four fine aggregates and eight coarse aggregates) using 40mm size ISS HBG metal including cost and conveyance of all materials to site and including for the mixing, laying and labour charges and all incidental charges such as water providing etc., complete as per standard specification	1	M <sup>3</sup>		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
5	69	M <sup>2</sup>	Supplying and erecting steel centering including necessary supports for plane surfaces for Reinforced Cement Concrete works such as column footings, column pedestals, plinth beams, grade beams, staircase steps, etc. which require only nominal strutting using mild steel sheets of size 90cm x 60cm and 10 BG stiffened with welded mild steel angles of size 25mm x 25mm x 3 mm for boarding, laid over silver oak joists of size 10cm x 6.5cm spaced at about 75cm centre to centre or at suitable intervals etc. complete in all floors complying with standard specification. (Payment for centering shall be given after the concrete is laid)	1	M <sup>2</sup>		
6			Supplying and erecting centering for sides and soffits including necessary supports and strutting upto 3.29 M height for plane surfaces as detailed below in all floors with all cross bracings using Mild Steel sheets of size 90 x 60 cm and 10 BG stiffened with welded Mild Steel angle of size 25mm x 25mm x 3 mm for boarding laid over silver oak joists of size 10cm x 6.50 cm spaced at about 90 cm centre to centre and supported by casurina props of 10cm to 13 cm dia spaced at not more than 75 cm centre to centre etc. complete complying with the standard specification. (Payment for centering shall be given after the concrete is laid)	1			
a	139	M <sup>2</sup>	For plane surfaces such as RCC floor slab, roof slab, beams, lintels, bed blocks, landing slab, waist slab, portico slabs and beams, etc	1	M <sup>2</sup>		
b	44	M <sup>2</sup>	For plane surfaces such as rectangular or square RCC columns, sunshades, top and bottom slab of RCC boxing, etc.	1	M <sup>2</sup>		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
7			M-20 CONCRETE - Providing and laying in position, standardised design mix M-20 Grade using 20mm and down graded hard broken granite stone jelly for all RCC items of works with minimum cement content of 350Kg/m <sup>3</sup> and maximum water cement ratio of 0.55, including admixture(plasticiser/super plasticiser) in recommended proportions as per IS:9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability with about (5.70 cu.m.)940.50Kg of 20mm machine crushed stone jelly and with about (2.80 cu.m.)462.00Kg of 10-12mm machine crushed jelly and with about (4.25 cu.m.)701.25Kg of sand, but excluding cost of reinforcement grill and fabricating charges, centering and shuttering and also including laying, vibrating with mechanical vibrators, finishing, curing, etc and providing fixtures like fan clamps in the RCC floor/roof slabs wherever necessary without clamping extra, etc. complete complying with standard specification and as directed by the departmental officers. the coarse and fine aggregates to be used should comply with the requirements of IS 383- 2016. (No separate payment will be made by the department for the excess usage of materials as per design mix.) (SI No 81)				
a	6	M <sup>3</sup>	Foundation	1	M <sup>3</sup>		
b	29	M <sup>3</sup>	Ground Floor	1	M <sup>3</sup>		
8	3850	Kg	Supplying and fabricating and placing in position MS (or) R.T.S. bar for reinforcement to all RCC works as per the design given including cost of steel and binding wire also in all floors.	1	Kg		
9	39	M <sup>3</sup>	Brick work in CM 1:5 (one cement & five sand) using II class ground moulded bricks of size 9"X4 3/8"X 2 3/4" including finishing, curing, etc., complete complying with standard specification.	1	M <sup>3</sup>		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
10	3	M <sup>3</sup>	Brick Partition Walls using II class ground moulded chamber bricks of size 9"X43/8"X 23/4" in C.M 1:3 using hoop iron reinforcement,if found necessary standard specification including finishing, curing,etc., complete complying with standard specification - 10 sqm	1	M <sup>3</sup>		
11	130	M <sup>2</sup>	Plastering with cement mortar 1:3,10 mm ,thick in all floors including cost and conveyance of all materilas to site and labour charges etc,complete as per standard specifications (S.I.306)	1	M <sup>2</sup>		
12	346	M <sup>2</sup>	Plastering with cement mortar (1:5) 12mm ,thick in all floors including cost and conveyance of all materilas to site and labour charges etc,complete as per standard specifications (S.I.306)	1	M <sup>2</sup>		
13	7	M <sup>2</sup>	Dadoing Supplying and laying in flooring with fully polished Sinthetic Grey colour Granite stone of 10mm thick (average) of 2' X 1' in size laid in cement mortar 1:2 - 20 mm thick & pointed with same colour of cement etc., complete as per standard specification	1	M <sup>2</sup>		
14	476	M <sup>2</sup>	Painting two coats with ready mixed Plastic Emulsion Paint approved quality and colour over a priming coat, including thorough scrapping, clean removal of dirt, etc complete and including necessary plaster of paris, putty, wherever required etc, complete as per standard specification. - 10 sq.m	1	M <sup>2</sup>		
15	12	M <sup>2</sup>	Laying the Flooring with Anti skid coloured ceramic tiles of sizes 305mm X305mm X 6mm size of approved make and quality and colour I Set in cement mortar 1:3 (one cement ,three sand) over 20 mm base layer plastering and pointing with white cement neatly as directed.	1	M <sup>2</sup>		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
16	18	M <sup>2</sup>	Dadoing walls with Glazed tiles of sizes 305mm X200mm X 6mm size of approved make and quality and colour I Set in cement mortar 1:2 (one cement ,two sand) over 10 mm base layer plastering and pointing with white cement neatly as directed.	1	M <sup>2</sup>		
17	59	M <sup>2</sup>	Paving the floor with Vitrified Marbonite tiles of approved quality and colour of size 600x600x8mm thick of approved make, quality and colour in all floors over a base layer of cement mortar 1:3(one cement three sand) 20mm thick and laid straight alignment and pointed neatly with colour cement at the rate of 0.40kg/m <sup>2</sup> laid without any air gap in the tiles neatly and fixing in position as per standard specifications and as directed by the departmental officer. The colour & quality of tiles should be got approved by Municipal Engineer before use on work	1	M <sup>2</sup>		
18	11	M <sup>2</sup>	Supplying & fixing door shutters for Mediun Density Fiber Board of exterior grade 35 mm thick,single leaf conforming to IS:12406/1989 with 35x12 mm T.W.Lipping on all edges with necessary adhesives and CP screws complying with standard specifications. The rate is inclusive of threee coats of best quality varnish but excluding cost of furniture fittings.such as 300 mm tower bolt 2nos,200mm towerbolt I no. 300mm Aldrop 1 No. Alu handle ornamental type 2 Nos,and 1 No. Door stopper etc complete.	1	M <sup>2</sup>		
19	7	M <sup>2</sup>	Supply and fixing of PVC Solid Doors using 19gauge 19mm MS Sq,tubes for styles and frames, 15mm MS Sq.tubes for to, Lock and bottom rails. The Steel Tubes shall be covered with 5mm thick Solid PVC sheets. Shutter using 5mm thick solid PVC sheets for panelling shall rigidly fixed in position including furniture and fittings. The over all size of styles shall be 50mm X 30mm. The over all size of top rail, Lock rail and bottom rail shall be 75mm X 30mm. The over all size of frames shall be 50mm X 45mm with suitable tabate for housing the shutter etc, complete as per standard specification. PWD SOR Pg. No. 49 SI.No.122 a	1	M <sup>2</sup>		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
20	2	M <sup>2</sup>	<p>UPVC Ventilator</p> <p>Specification: Supplying and fixing UPVC (Un-Plasticized Polyvinyl Chloride) Louvered Ventilators of from the profile the size of outer frame 60mm x 58mm and shutter profile size of 60 x 78mm both profiles are reinforced with GI/1mm 125GSM and 100% corrosion free, the profile are multi chambered sections with wall thick of 2mm. The EPDM rubber (black colour) covered with all over the edges of frame and shutter. The corners and joints should be welded and cleaned. Radiations pin headed glass 4mm thick should be provided in the louvers. The window should be fixed to the wall with 100% packing with screws and silicon packing all round the frames. The ventilator should be got approved from the Executive Engineer before use on work PWD SOR Pg. No. 66</p>	1	M <sup>2</sup>		
21	8	M <sup>2</sup>	<p>UPVC Window</p> <p>Specification: Supplying and fixing UPVC (Un-Plasticized Polyvinyl Chloride) Windows of casement type (open) from the profile the size of outer frame 60mm x 58mm and shutter profile are reinforcement with GI/1mm 125GSM and 100% corrosion free, the profiles are multi chambered sections with wall thick of 2mm. The EPDM rubber (black colour) covered with over all the edges of frame and shutter the shutter will be provided with Espag multi power point locks and also it operates as handle. The corners and joints should be welded and cleaned. Radiations free pin headed plain or brown colour glass 4mm thick should be provided to the shutter and it should not allow leakage of water even at most ranging storms and should have key lockable action, security protective hinges, strong locking systems and as per size for arresting noise and energy loss. The connecting mechanism between sash and outer frame that enables opening of the window. The window should be fixed to the wall with 100% packing with screws and silicon packing all round the frames. The window should be got approved from the Executive Engineer before use on work(PWD SOR Pg. No. 65)</p>	1	M <sup>2</sup>		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
22	3	M <sup>2</sup>	Designing the Semi Unitised Structural Glazing System with open groove joint as per design intent, preparation of shop drawings for approval, supply, fabricate, erect as per approved shop drawings at all floor levels and all floor heights including conducting field test as per the test criteria set out in the particular specification (Metholodgy should be got approved by the Dept. Officials.) Design the framing system (i.e. male & Female frame) to support vision panels, spandrel panels either with glass or aluminium composite panel, openable, window panels on a continuous framing supported between floors. Also design the split framing unutilized glazing system in case of strip or punched windows with vision panel proposed with either insulated / Monolithic glass, groove width in the system both in horizontal and vertical shall not be more than 20mm. Glazing of panel shall be done only at factory at the controlled atmosphere PWD SOR P.NO 58	1	M <sup>2</sup>		
23	71	M <sup>2</sup>	Finishing the top of roof with one course of machine pressed tiles of size 200 mm x 200 mm x 20 mm of approved quality in Cement Mortar 1:3 (One Cement add three sand) 12 mm thick mixed with water proofing compound conforming to ISS at 2% by weight of cement used and the joints pointed neatly to full depth of tiles with the same cement mortar mixed with red oxide and water proofing compound including curing etc., complete	1	M <sup>2</sup>		
24	6	M <sup>2</sup>	Manufacturing, Supplying and Fixing of Stainless Steel Hand rails for staircase using 50mm dia 304L Grade Stainless Steel pipe of 1.60mm thick at required locations to a height of 900mm from finished floor level welded to 38mm dia Stainless Steel pipe post of 1.00mm thick as vertical at 900mm centre with 2 Nos. of 25mm dia intermediate horizontal stainless steel pipe of 1.60mm thick in between. The vertical pipe has to be welded to the 100 X 100 X 6mm MS base plate encased in the base concrete. The rate is inclusive of the charges for cutting, bending, welding, grinding, polishing, conveyance, electrical charges, etc. complete PWD SOR Pg. No. 63 SI.No. 239	1	M <sup>2</sup>		



SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
25	8	M <sup>3</sup>	Weathering Course with Concrete Broken Brick (S.I.No.278) & ( P & D) Data 54.Jelly 20mm gauge in pure slaked lime (no sand to be added) over roof slab,the proportion of brick jelly to lime being '32 to 12.5 well beaten with wooden beaters for giving required slope and thickness as directed by the departmental officers etc., complete.-10 cum	1	M <sup>3</sup>		
			<b>PLUMBING WORKS</b>	<b>1</b>			
26	6		Providing & fixing PVC RAIN WATER DOWN FALL PIPE of the following dia with necessary T.W.Clamps Plugs, Shoes, Bemds, other clamps, screws nails etc., complete complying with standard specification. The rate is inclusive of cost of removable iron gratings of appropriate size. The size of Teak Wood plugs used is 150X25mm in front & 200x75mm in rear (wall side) with a depth of 110mm. The pipe is to be fixed by means of "U" clamps at the centre of pipes to be fixed.110mm dia PVC Pipe [4 Kg/SqCm](D)	1			
27			Supplying and fixing in position best quality P.V.C soil/ waste pipes (6KSC) of various sizes having ISI mark and providing leakproof joints including fixing to the wall with P.V.C/ M.S clamps etc., and making connection to all sanitary fittings, dismantling masonry/R.C.C. works wherever necessary and making good the dismantled portion to the original condition, complying with standard specifications.(D)				
	6	RM	110mm dia pipe	1	RM		
28	1	No	Supplying and fixing of 1000 liters capacity PVC tank of approved quality including cost of all materials like tank fittings, lead .lift, errection etc complete. PWD SOR PGNO:50	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
29			Supplying and fixing in position first quality and approved variety of Gun Metal Gate Valve (Heavy type ) with I.S.I.mark of the following sizes including cost of Shellac , thread etc.,including labour for cutting and threading of G.I.Pipes etc.,complete complying with standard specifications for both internal and external water Supply arrangements. (D)	1			
a	2	No	25mm Gun Metal Valve	1	No		
b	2	No	32mm Gun Metal Valve	1	No		
30			Suppling and fixing in position 15mm.diameter brass / C.P screw down tap / pillar tap (heavy duty) of approved make conforming to I.S.specifications and quality including cost of shellac, thread etc.complying with standard specifications and including cutting and threading wherever necessary (D)				
a	4	No	SD Tap	1	No		
b	3	No	Pillar Tap	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
31			P.V.C. Pipes (10Kg/SqCm) Supplying laying and jointing P.V.C pipes (10Kg/SqCm) of approved quality and best variety conforming to I.S.S & with I.S.I mark, of the following sizes including cutting , Fixing to PVC specials using Adhesive but excluding cost of such specials and fixing to wall with necessary teak - Wood Plugs,PVC Clamps and screws,making holes on the wall or drilling holes in roof and making good the dismantled portions to original condition with necessary brick work and plastering wherever necessary with necessary scaffolding charges.(D)				
a	22	RM	25mm dia Pipe	1	RM		
b	24	RM	32mm dia Pipe	1	RM		
32			Supplying PVC Specials (with working pressure 10 kg. / sq.cm.) in water supply arrangements (both in internal and external water supply arrangements PWD SOR PG.NO:99 SI.NO:367				
a			Coupler				
	5	No	25mm dia Pipe	1	No		
	5	No	32mm dia Pipe	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
b			Elbow				
	5	No	25mm dia Pipe	1	No		
	5	No	32mm dia Pipe	1	No		
c			BEND				
	5	No	25mm dia Pipe	1	No		
	5	No	32mm dia Pipe	1	No		
d			Tee				
	5	No	25mm dia Pipe	1	No		
	5	No	32mm dia Pipe	1	No		
e			End Cap				

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
	5	No	25mm dia Pipe	1	No		
	5	No	32mm dia Pipe	1	No		
f			Reducer				
	5	No	25 mm x 20 mm	1	No		
	5	No	32 mm x 25 mm	1	No		
g			Reducer Tee				
	5	No	25 mm x 20 mm	1	No		
	5	No	32 mm x 25 mm	1	No		
h			Reducer Elbow				
	5	No	25 mm x 20 mm	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
	5	No	32 mm x 25 mm	1	No		
i			Jet Nipple				
	5	No	25mm dia Pipe	1	No		
	5	No	32mm dia Pipe	1	No		
33			Supplying and fixing in position PVC specials of the following dia and types of approved quality confirming to BIS and providing leak proof joints including fixing to the walls and giving connection to the PVC soil stacks, dismantling the masonry or RCC works and re-doing the dismantled portion to original condition etc., complete complying with standard specifications. (The PVC specials should be got approved by the Executive Engineer before use on works).(D)				
a			PVC Elbow				
	5	No	110mm dia	1	No		
b			PVC Elbow with Door				
	5	No	110mm dia	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
c			PVC Tee				
	5	No	110mm dia	1	No		
d			PVC Tee with Single Door				
	5	No	110mm dia	1	No		
34	3	No	Supplying and fixing in position best quality approved make white glazed earthenware wash hand basin of size 550 X 400 mm with a pair of cast iron brackets, including cost of 15mm diameter brass chromium plated pillar tape, 32 mm diameter C.P. Waste union, 32 mm diameter P.V.C. waste pipe with rubber plug and chain, 15mm diameter G.M.wheel valve, 15mm dia brass nipple, 15mm dia nylon connections etc., including fixing the wash hand basin in the wall in position with a pair of C.I. brackets with teak wood plugs and screws and giving necessary water supply connection and painting the brackets with two coats of paint over a priming coat of anticorrosive paint including testing for leakage etc., complete complying with standard specifications (D)	1	No		
35			Supplying and fixing in position 15mm dia C.P. Shower rose & stop cock of approved make conforming to IS specifications and quality including cost of Shellac thread etc. complying with standard specification. PWD sor pg.no:48				
b	5	No	Stop Cock	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
36	3	No	Supplying and fixing in position Indian make bewelled edge mirror of size 600 x 450mm quality including cost of Rawal plugs, brass screws. etc. complying with standard specification.(D)	1	No		
37	6	No	Supplying and fixing best approved quality Brass C.P / Al anodised Towel rail 600mm. long and 20mm Diameter with brackets of same material including cost of Teak-Wood plugs and C.P.Screws etc., complete complying with standard specifications(D)	1	No		
38	1	No	Providing rain water harvesting using 3 nos.of RCC well rings of 90cm inner dia (clear) with 5cm wall thickness made out of cement concrete 1:2:4 using 20mm hard broken jelly to a height of 30cm each supplying and fabricating 16 nos. of 6mm dia MS rod vertically and 3 nos. of 6mm dia MS rod circumferentially tied together with 18 guage binding wire for well rings including necessary earth work excavation 1m dia to a depth of 1m, supplying and filling 40mm HBG inside the erected well ring to a depth of 90cm, and top covered with RCC circular perforated cover slab of 1m dia and 5cm thick which inclusive of cost and fabrication of 6mm M.S reinforcement at 15 cm spacings on both directions and one 6mm M.S rod ties at the edge of the slab circumferentially including cost of moulding, curing, finishing and well placing in position and disposing off excavated earth with all initial leads and lifts in places as shown by the Departmneal officers etc., complete in all respects.	1	No		
39	3	No	Supplying and fixing in position C.P. Soap tray of size 150 x 150mm including cost of teak wood plug and C.P. screws. etc. complete complying with standard specification.(D)	1	No		



SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
40	3	No	Supplying and fixing in position european water closet of size 580 X 440mm, white glazed earthen ware of approved quality with 'P' trap or 'S' trap confirming to IS:2556 - Part XII with sand cushion and forming flooring alround the closet using 40mm broken brickjelly in lime concrete 1:2:5 ( one part of lime, two parts of sand and five parts of brick jelly) 100mm thick and finishing the top to required slope and including giving necessary connection to cast iron soil pipes/ PVC pipes by dismandling brick masonry, reinforced cement concrete roof/floor slab and making good the disturbed portion to original condition without leakage etc., complete complying with standard specifications and as directed by the departmental officers. . (D)	1	No		
41	4	No	Supply and fixing of PVC. Nahini / Floor Trap with stainless Steel Gratings- 100 mm x 75 mm including all charges etc, complete as per standard specification.(D)	1	No		
			<b>BORE WELL</b>				
42	1	No	Investigation charges for Geophysical survey finding of yield to the point drilling of Borewell for all etc., complete	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
43			Drilling of 125mm (4 1/2") nominal Dia vertical borewells anywhere in Tamilnadu in all formations, suitable for down the hole hammer drilling such as medium hard rock to hard rock formation, consolidated formation etc. and drilling over burden to a Dia not less than 200mm including insertion of 165 mm PVC casing pipe, couplings caps and other relevant materials required up to the depth as directed by the Engineer or his representative including grouting of cement 25kg (minimum) up to the depth of over burden are including borewell development flushing of borewell at a pressure 7kg/cm <sup>2</sup> (100 lb. per square inch) including yield test, crew charges, cost of consumables, transportation charges of casing pipes and all other materials including assembling complete to the satisfaction of the Engineer and as stipulated in the technical specification. The entire works should be carried out as per IS 2800 Part I & II / 1979. Finished Dia of borewells shall not be less than 145mm				
	30	RM	Upto 60m depth	1	RM		
44	1	No	Supply and delivery of clear water vertical wet type submersible pump suitable for 150mm Dia borewell conforming to IS 8034/2002 as amended thereafter and BEE 3 Star Rated capable of discharging noted LPM against head of water column due to all causes. The pump shall be with stainless steel shaft and dynamically balanced bronze or Cast SS impeller, brass screws and CI FG 200 grade pump bowl/diffuser with ISI mark. The pump shall be directly coupled to a continues rated two pole suitable wet type vertical squirrel cage induction motor as per IS 9283 /1995 and as amended there after, suitable for operation in AC three phase 415 V+/- 10 %, 50 HZ +/- 5 % ( <b>PAGE 88</b> ) ( <b>50 Lpm X 60 m</b> )	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
45	1	No	Labour Charges for the erection of Submersible pump set in borewell including fixing and jointing submersible cable with proper clamps up to the starter to required depth and also fixing of riser pipes to the required depth valves erection clamps, and erection of panel board consisting of TPICN switches starter voltmeter, Ammeter, three point (indicating) lamps capacitor single phasing preventor and laying and jointing the cable and twin earthing for etc., Complete and testing the pump set and trail run for 10 days.	1	No		
46			Supply and Delivery of 150mmdia PVC casing Pipes including cost and conveyance of materials and Labour charges etc. complete as per standard. specifications				
	20	RM	150mm Dia PVC Casing Pipe	1	RM		
47	1	No	Supply and delivery of 3 phase panel board star delta with two level guard and auto start to suitable for 5 HP submersible pump set etc. complete	1	No		
48			Supplying delivery of G.I and PVC Pipes and specials of approved quality and best verity of B Class pipe including cost conveyance of materials to work site etc., complete.				
a	36	Rm	50mm Dia G.I Pipe	1	Rm		
b	6	No	50mm Dia G.I Coupling	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
c	2	No	50mm Dia G.I Elbow	1	No		
d	1	No	50mm Dia G.I Union	1	No		
e	1	No	50mm Dia Non Return valve	1	No		
f	1	No	Borewell Clamp set	1	No		
g	1	No	Borewell Cover Plate	1	No		
h	20	Rm	40mm Dia PVC pipe	1	Rm		
i	1	No	40 mm Dia PVC Coupling	1	No		
j	1	No	40 mm Dia PVC Elbow	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
k	1	No	40 mm Dia PVC Bend	1	No		
l	1	No	40 mm Dia PVC Reducer 50 x 40 mm	1	No		
49	60	Rm	Supply and delivery of PVC includes and sheeted 3 core flat type 4.00sq.mm castle conformists	1	Rm		
			<b>ELECTRICAL WORKS PANELS LIGHT FIXTURES</b>				
50	1	No	Supply and fixing of TNEB meter board suitable for 3 phase 200A service connection made up of suitable angle iron frame work of size 3 feet x 2 feet using angle iron of size 1-1/2" x 1-1/2" x 1/4" rigidly fixed on wall covered with hylem sheet of size 3 feet x 2 feet of 12mm thickness with necessary bolts and nuts supports and supply and fixing of 3 Nos. 200A fuse units (500V), 1 No. neutral link, copper earth flat of size 1" x 1/4" with inter connection of EB meter to fuse units by 19/16 PVC insulated copper wire with earth connection complete SD 131	1	No		
51	2	No	Supply and fixing 16amps DP switch with metal clad(side handle) of 500 V with F & N on suitable teak wood Board of size 30cmx20cmx6 cm including necessary internal conection, earth connection etc., complete (SD 142)	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
52	2	No	Supply an fixing o 6way SPDB of 16A /way with 16ADP switch with metal clad of 500V with fuse and neutral (sidehandle) on suitable angle iron frame work with trunking box MS cableen try box with PWD earthing (SD 153)	1	No		
53	10	RM	Supply and run off 2 of 4 sqmm PVC insulated single core unsheathed copper conductor cable of 1100 V grade with ISI mark confirming to IS:694/1990 with continious earth connection by means of 1.50 sqmm PVC insulated single core unsheathed copper conductor cable confirming to IS:694/1990 in suitable PVC rigid pipe 1.8mm thick concealed in wall for mains including the cost of PVC pipes and specials, cables, cement, brass screws, T.W plugs, saddles and labour etc., complete in all respects as directed by the departemental officers. (derived from SD 57)	1	RM		
54	6	No	Wiring with 2 x 1.5 sq.mm. (22 / 0.3) PVC insulated unsheathed SC copper conductor of 1100V grade in suitable PVC rigid pipe concealed in wall and ceiling with PVC accessoires with TW switch box and 5A FT switch in flush with wall with 3mm thick hylum sheet cover for making good of the concealed portion with suitable colour for PVC concealed fan point (for electronic regulator) SD 24	1	No		
55	3		<b>4 ways 3 phase DB</b> No. of ways incomer MCB / Isolator - 4 No. of ways incomer ELCB / RCD - 4 No. of outgoing ways - 12 PWD SOR 2021-22 Pg.no. 136 Sl.No. 16.1.a	1			
56	3	No	Supply and fixing of 8 way single pole and neutral MCB sheet steel enclosure distribution board with doubledoor (metal) 1 No. 32A DP MCB as incoming and 6 Nos. 6A to 32A SPMCB outgoing in flush with wall andmaking good of the concealed portion with earth connection only. The MCB DB and MCB's should be with ISImark (like standard make) (SD167)	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
57	3	No	Supply and fixing of 32A TPNMC switch with suitable angle iron frame work with MS cable entry boxes with earth connection only (SD164)	1	No		
58	2	No	SUPPLY & INSTALLATION OF AIR-CONDITIONER WITH COPPER COIL. 1.5 TR Split Type AC Unit (PWD SOR PG NO: 142)	1	No		
59	2	No	Supply and installation of 5 KVA capacity Automatic Voltage Stabilizer with time delay relay (PWD SOR PG NO: 143)	1	No		
60	2	No	Supply and laying of 5/8" and 3/8" copper pipe (Extra beyond 3 metres supplied with AC unit) (PWD SOR PG NO: 143)	1	No		
61	2	No	Supply and fixing of MS stand for fixing outdoor unit (PWD SOR PG NO: 143)	1	No		
62	2	No	Wiring with 2x1.5sqmm PVC insulated single core unsheathed copper conductor cable of 1100V grade with ISI mark confirming to IS: 694/1990 in suitable PVC rigid pipe of 1.8mm thick with ISI mark concealed in wall and ceiling with PVC accessories in flush with wall including the cost of cable, pvc pipe and specials, ceiling rose, flush type 5ams SP mark switch, PVC junction box, 16gauge MS switch box 100mm x 100mm x 75mm covered by laminated hylem sheet 3mm thick, cement, labour and making good of concealed portion with suitable colour for concealed PVC LIGHT point. (SD 24)	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
63	2	No	Wiring with 2 x 1.5 sq.mm. (22 / 0.3) PVC insulated single core unsheathed copper conductor of 1100V grade in suitable PVC rigid pipe concealed in wall and ceiling with PVC accessoires in flush with wall with 3mm thick hylum sheet cover with TW switch box and 5A FT switch and making good of the concealed portion with suitable colour for PVC concealed light (6 points per coil) (for rooms like bath, toilet & pumproom, etc.)(SD 26)	1	No		
64	2	No	Wiring with 3 x 1.5 sq.mm. (22 / 0.3) PVC insulated single core unsheathed copper conductor of 1100V grade in suitable PVC rigid pipe on wall and ceiling with PVC accessories and with TW switch box and 5A FT switch (two way) with painting of suitable colour with continuous earth wire connection of 14 SWG TC wire for open PVC staircase light point (SD 27)	1	No		
65	50	RM	Supply and run off 2 of 2.50sqmm PVC insulated single core unsheathed copper conductor cable of 1100 V grade with ISI mark confirming to IS:694/1990 with continious earth connection by means of 1.50 sqmm PVC insulated single core unsheathed copper conductor cable confirming to IS:694/1990 in suitable PVC rigid pipe 1.8mm thick concealed in wall for mains including the cost of PVC pipes and specials, cables, cement, brass screws, T.W plugs, saddles and labour etc., complete in all respects as directed by the departemental officers. (derived from SD 55)	1	RM		
66	6	No	Supply and fixing of 5A / 15 A 3 Pin combined flush type wall socket with 15A flush type switch concealed in suitable MS Box in flush with wall and covered with 3 mm thick hylem sheet(SD 138)	1	No		



SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
67	15	RM	Supply and run off 2 of 4 sqmm PVC insulated single core unsheathed copper conductor cable of 1100 V grade with ISI mark confirming to IS:694/1990 with continious earth connection by means of 1.50 sqmm PVC insulated single core unsheathed copper conductor cable confirming to IS:694/1990 in suitable PVC rigid pipe 1.8mm thick concealed in wall for mains including the cost of PVC pipes and specials, cables, cement, brass screws, T.W plugs, saddles and labour etc., complete in all respects as directed by the departemental officers. (derived from SD 57)	1	RM		
68	3	No	Earthing as per the ISI specification with an earth electrode of 2.10 metre Class 'B' GI pipe of dia not less than 40mm with copper earth plate of size 125mm x 50mm x 6mm with necessary funneling arrangements with necessary masonry work and with 38mm RCC cover slab for the brick masonry (SD233)	1	No		
69	30	RM	Supply and run of 1 of No.8 SWG GI wire for earth connection (SD74)	1	RM		
70	9	No	Supply and fixing of 18W LED 3000K Square type resessed fiiitng (Philips/Havells) complete with T.W round blocks on wall or ceiling with flu tube with PVC unsheather copper leads from terminals to the filling (SI NO : 16) ELECTRICAL SOR	1	No		
71	6	No	Supply and fixing of single box type 4'36W fluorescent fitting complete with electronic ballast with TW roundblocks on wall or ceiling with flu tube with PVC unsheathed Copper leads from terminals to the fitting (SD87)	1	No		

SI. No.	Quantity		Description	Unit		Rate (Rs. in Figures and in Words)	Amount
72	4	No	Supply and fixing of WT bulk head fitting with guard (Philips / Bajaj / Crompton / K-Lite) suitable for 11W CFL (SD83)	1	No		
73	5	No	Supply and fixing of 1200mm (48")sweep AC ceiling fan complete with stepped electronic 300W regulator with the existing down rod on the existing clamps. (SD 110)	1	No		
74	6	No	Supply and fixing of 5A / 15A 3 pin combined flush type wall socket with 15A flush type switch on suitable TW Box (SD 136)	1	No		
			<b>Sub Total</b>				
			<b>GST 12%</b>				
			<b>Grand Total</b>				

Contractor signature

Challan No :  
Contractor Register No:  
Address :  
Mobile No :