

E-RETENDER No.35/20-21

KERALA WATER AUTHORITY

FORM No. 83

NOTICE INVITING TENDERS FOR WORKS

Name of Work:-State plan 19-20-WSS to Poothady-Dismantiling of the damaged clarifloculator bridge and accessories at WTP Athirattukunnu-Reg.

Locality-ATHIRATTUKUNNU-WAYANADU DISTRICT

Last date of receipt of Tender:- up to 3.00 PM on 28.09.2020

KERALAWATERAUTHORITY

E-TENDERNOTICE

The Executive Engineer, PH Division, KeralaWaterAuthority, Sulthan Bathery invites **electronic tenders** on behalf of the Managing Director, Kerala Water Authority in single cover system for the following works on percentage basis from Registered Class A/B/C contractors of Kerala Water Authority or contractors

Tendere

TenderingAuthorit

Registered in other departments in Kerala State/in other states in India /in equivalent class and manufacturers, eligible for 'A/B /C'and D class license from Kerala Water Authority. The renderers shall have experienced in implementing similar works.

E-RETender No	35/20-21
Name of Project	STATE PLAN 19-20
Name of Work	State plan 19-20-WSS to Poothady-Dismantling of the damaged clarifloculator bridge and accessories at WTP Athirattukunnu-Reg
Source of fund	Deposit
Probable amount of contract	Rs.828427/-
Sale of Tender Documents	
Cost of Tender form	Rs.2800/- (including Taxes)
EMD	Rs. 21000/-
Site visit	
Pre-bid Meeting	
Last date of receipt of tender	28.09.2020 <i>Upto 3.00PM</i>
Date and time of opening of tenders:	30.09.2020 up to 3.00 pm

The detailed Tender Notice and the bid document can be obtained from the web site www.etenders.kerala.gov.in. For viewing the detailed tender notice and tender documents the contractor has to enroll with **nic portal**. Help desk manual is available in the home page of the website Onetime registration is valid for all tenders. Enrolled contractors can down load the bid documents from the web site free of cost. The tender fee needs to be paid at the submission of bid only.

The remittance of tender fee and bid security (EMD) is by on line payment through credit card /net banking.

Once the payment transaction is successful, the bidder will get a transaction reference number which has to be retained by him. Unless the tender cost and bid payments are made successfully, the submission of tender will not be possible.

If any of the date's mentioned above happens to be holiday, the actions will be conducted on the next working day. All other relevant rules followed by KW shall be applicable.

Place: S Bathery

Date: 22.09.2020

Executive Engineer.
Kerala Water Authority



KERALA WATER AUTHORITY
NOTICE INVITING TENDERS FOR WORK
FORM No. 83

Sealed tenders are invited for and on behalf of the K W.A form registered contractors of K W A class.....d and above ..for the work **State plan 19-20-WSS to Poothady-Dismantiling of the damaged clarifloculator bridge and accessories at WTP Athirattukunnu-Reg**

The items and sub-Heads of works to be done are enumerated in the sub joined schedule. Unless otherwise specified, the tender must be for the whole or any individual work and part tenders are liable to rejection. A Contractor may tender for more than one work with the earnest money deposit specified in each case, but shall not tender for any part of a work only, unless specifically so required.

3. All works shall be done in conformity with the specification and conditions of contract in force in the KWA. In case of schedule rate contract tenders must quote their own rates specifically for each item without reference to the departmental estimates or the current schedule of rates and for percentage rate contract only a single rate as an overall percentage above or below or at the rate given in the schedule by a single entry at the bottom of the schedule under the head quoted rate may be made. The rates quoted shall be inclusive ones, covering all the operations contemplated in the specifications and tender schedules and all incidental work necessary for such operations such as shoring, bailing out, form work, scaffolding, etc. "The rates quoted shall be inclusive of sales tax".

(a) When tenders are delivered based on contractor's alternate designs such tenders should be accompanied by a schedule of quantities of materials to be used for each item of work with complete detailed specifications and data. In such cases the benefit of any savings in the quantities of materials actually used up under each item of work during execution will accrue to the department.

(b) The overall percentage rate accepted varied on any account whatever.

4. The Tender should be submitted through electronically on or before **3.00 pm** on.. 27.07.2020. They will be opened at the office of delivery on 29.07.2020 at **3.00 p.m** by the Executive Engineer or such officer as may be authorised in this behalf in the presence of such of those tenders or their authorised agents as may be present, In case it is not possible to open the tenders on the specified date due to any valid reason, the revised time and date of opening of tenders will be intimated in writing of the tenderers.

The total amount of each tender will be read out the tender all corrections in the tender will be attested by the tender opening officer with dates and initials and by the tenderer, if present. A list of corrections which remain unattested by the tenderer will be made out and pasted to each tender". Details of individual rates will be treated as confidential and will not be read out, Each tender should be accompanied by a receipt for an Earnest Money Deposit of Rs.21000/-- The Earnest Money may be produced through e payment.

(a) ~~EMD -~~

(b) ~~Deposit at call on a Schedule Bank assigned in the favour of the Kerala Water Authority.~~

(c) ~~Cash remittance is not normally accepted. The officer receiving the tender may if he considers necessary relax this rule and permit cash being received in special cases.~~

Tenders not accompanied by such deposit, or receipt will not be considered, Contractors who have deposit permanent Earnest Money and have secured exemption from individual payments, need not to do this except when special earnest money is asked to be deposited.

5. **Selected contractor will be required to produce Income-tax and Sales-tax clearance certificates before final payments are made for the work, and before security deposit released.**
6. **The contractors submitting tender should produce copies of solvency certificates clearly indicating to what extent they are solvent from the Tahsildar of the Taluk where they reside along with their tenders.**
7. **Each tenderer must also send a certificate of Income-tax verification from the appropriate Income-tax authority in the form prescribed there-for.**

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

If a certificate had already been produced by the tenderer during the calendar year in which the tender is made in respect of a previous tender it will be sufficient if particulars regarding the previous occasion on which the certificate was produced are given.

All tenders received without a certificate as afore mentioned will be summarily rejected.

8. The tenderer shall examine closely the Madras Detailed Standard specification and also standard preliminary specification contained there in and sign the Divisional Office copy of the Madras Detailed Standard Specification and its amendment volume deleting the Arbitration clause in token of such study before submitting his tender unit rates which shall be for finished work in site. He shall also carefully study the

drawings and additional specification and all the documents which form part of the agreement to be entered into by the accept tenderer. The Madras detailed Standard specification and other documents connected with the contract such as specifications plans, descriptive, specification sheet regarding materials, etc., can be seen at any time during office hours on office days in the office of the Executive Engineer/Assistant Engineer KWA Division/ Sub-division.

A copy of the set of contract documents can also be had on e-payment of **Rs.2800/- including taxes** for each set.

9. The tenderers attention is directed to the requirements for materials under the clause "Materials and Workmanship in the preliminary specification". Materials conform to the Indian Standard specification shall be used on the work, and the tenderer shall quote his rate accordingly.
10. Every tenderer is expected before quoting his rate to inspect the site of the proposed work. He should 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 descriptive sheet. The best class of materials to be obtained from quarries or other sources defined shall be used on the work. In every case the materials must comply with the relevant standard specification, Samples of materials as called for in the standard specification, or in this tender notice, or as required by the Executive Engineer in any case shall be submitted for the Executive Engineer's approval before the supply at site of work is begun. If the contractor after examination of the source of materials defined in the Descriptive Specification sheet, is of opinion that materials complying with the standard or other specifications of the contract cannot be obtained in the Descriptive Specification sheet he shall so state clearly in his tender and state where from he intends to obtain the materials subject to the approval of the Executive Engineer. The Government will not/ however after acceptance of contract rate pay any extra charges for load or for any other reasons, in case the contractor is found later on to have misjudged the materials available. Attention of the contractor is directed to the standard "preliminary specification" regarding payments of segniorages tolls, etc.

NOTE:-The Authority does not undertake to contract or make available any approach road or other means of approach to the proposed work site/and tenders shall get acquainted with the available means of approaches to the proposed site and quote for the various items. The department shall not be liable for any claim raised later on the plea of non-availability or non-access to the site.

11. The tenderers particular attentions is drawn to the sections and clauses in the standard "Preliminary Specification" dealing with-
 - 1) Test Inspection and rejection of defective materials of work.
 - 2) Carriage
 - 3) Construction plant
 - 4) Water and lighting
 - 5) Cleaning up burning progress and for delivery
 - 6) Accidents
 - 7) Delays
 - 8) Particulars of payments

The contractor should closely persue all the specification clauses which govern the rates which he is tendering.

12. In consideration of the tenderer being allowed to quote for the work, he should keep the tender firm for a period of **..90 days...** from the date of opening the tender during with period or till the tenders are decided whichever is earlier, he will not be free to withdraw the tender. Any such withdrawal will entail forfeiture of the earnest money deposit for the work.

Due to departmental or administrative reasons it is found necessary to keep the tender open for a further period prior consent of the tenderer shall be obtained in writing for every further period of one month.

13. Before commencing work or within a week after the date when the acceptance of the tender has been intimate to him the tenderer shall deposit a sum sufficient to make up the balance of 5% of the probable value of contract subject to a maximum of Rs. One lakh which together with the amount of earnest money deposited shall be amount of earnest money deposit shall be treated as security for the proper fulfilment of the same and shall execute an agreement for the work in the prescribed form. If he fails to do this or in the case of contracts maintain a specified rate of progress (to be specified in each case in the tender schedule the earnest money and security deposit shall be forfeited to the Authority and fresh tenders shall be called for or the matter otherwise disposed off. If as a result of such measures due to the default of the tenderer to pay the requisite deposit, sign contractors or take possession of the work any loss to the Authority result the same will be recovered from him as arrears of revenue and should it be a saving to the authority the original contractor shall have no claim whatever to the difference, Recoveries on this or any other may be due to the contractor on this or any other subsisting contracts or under the Revenue Recovery Act or otherwise the Authority may decide
- 2) Investments in treasury Savings Bank will alone be treated as acceptable form of security.

14. The acceptance of the tender rests with the Executive Engineer who does not undertake to accept the lowest or any particular tender.

15. The right to carry out the work in conformity with or in a manner entirely different from the terms of this invitation that may be considered most suitable before or subsequent to the receipt of tenders due to exigencies of work is reserved with the department.
16. Drawings Schedule of quantities, specification of work to be done and conditions of contract to be entered into

can be seen at the office of the undersigned and/or of the Executive Engineer of any working day during office hours or purchased from the Executive Engineer's Office at Wayanadu on payments of a cost of Rs400/- per set. It shall be definitely understood that the authority does not accept any responsibility for the correctness or completeness of the schedule, that the schedule is liable to alteration by omission, deductions or additions at the discretion of the competent departmental officer or as set forth in the conditions of contract. The tenderer will however base this tender amount in the case of lump sum tender on the basis of those quantities etc.

17. Printed Authority forms of tender and general specification can be obtained from the office of the undersigned at the cost of Rs.400/- each. Tenders not submitted in such printed forms or submitted incomplete in any respect whatever, such as unattested errors and corrections in rates, quantities units or amounts (figures not expressed in words) totals of contract not entered, etc. shall be liable to summary rejection.
18. The earnest money deposit of the unsuccessful tenders will be refunded after tabulating tenders, keeping only the earnest money of the first 3 lowest tenders.

The Earnest money Deposit of the remaining unsuccessful tenderers will also be refunded within a week from the date of acceptance of the tender.

19. Solicitors fee, if any to be paid to the Law Officers of Authority for scrutinising or drawing up of agreements will be paid and the same recovered from the successful tender
20. Tenderers must also state in their tender if they are prepared to carry out at their tendered rates such portion or portions of the work as may finally be allotted to them by the officer deciding tender.

Note:-The Authority reserves the right to allot such portion of the work included in the tender at the rates quoted by the tenderer in absence of specific noting by the tenderer to the contrary against clauses 4 on page 5 of tender Form 84. Such allotment shall not vitiate the acceptance and the tender shall indemnify the Authority against any loss to the Authority. Due to failure on the part of the tenderer to carry out portion of the work allotted to him at the rates quoted by him.

21 a) The successful tenderer will have to carry out 25% more of the estimated quantity of every item at his agreed rates.

21. Any further information necessary can be obtained at the office of the undersigned on all working days during office hours.
22. The work should be completed in all respects in **Six months** from the date of order to start work is issued and in any case not later than.....**date of agreement**
23. Payment on lump sum basis or by final measurement at unit prices :
 - a) Final measurements need not be taken unless either the contractor or the Executive Engineer claims extras to or deductions from the quantities of Schedule A.
 - b) In case final measurements are claimed they shall be taken only for those items for which either the contractor or the Executive Engineer claims final measurements and the quantities of the remaining items in Schedule A shall be accepted as correct. The lump sums amount mentioned in the agreement will then be varied by addition there to 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 amount's arrived at by calculation at contract rates based on the revised quantities for the same obtained by the final measurement aforesaid.
 - c) It shall be accepted as a condition of the contract that the payment of the final bill to the contractor less the withheld amount and his acceptance there of shall constitute a full and absolute release of Authority from all further claims by the contractor.
under the contract.
 - d) Payment for additions and deductions for omissions.
No authorised variation shall vitiate the contract but additions and omissions shall be measured and dealt within accordance with clause 23 (b).
 - e) Items of work not expressly or impliedly described in the schedule, plans or specifications will be treated as "extras" They will include only items of works which though highly necessary for its completion, were not provided for the original contract.
The execution of an extra item of work and payment therefore will be based on the following conditions:-
 - i) There shall be an order in writing to execute the extra item of work duly signed by an Engineer not below the rank of an Assistant Executive Engineer before its commencement.
 - ii) If the contractor finds, after examining the specification and plans that extra are Involved, he should give notice to the Engineer to this effect shall proceed with the execution of the extra item, only after receiving instructions in writing from the Engineer
 - 2) Extra items may be classified as additional, substituted or altered items, depending on their relation or otherwise to the original item of work.
 - 3) The rates for extra items shall be worked out as below:-
 - i) In the case of an extra item whether additional, altered or substituted, if accepted rate for identical items provided for in the contract, such rates shall be applicable
 - ii) In the case of extra items whether additional, altered or substituted, for which similar items exist in the contract, the rates shall be derived from the original items by appropriate adjustment of cost of affected components. The percentage excess of deduction of the contract rate for the original item with reference to the departmental estimated rate shall be applied in deriving the rates for such items.
 - iii) In the case extra items whether altered or substituted and for which similar items do not exist in the contract and rates exist in schedule of rates, the rate shall be arrived at on fie basis of the departmental data rate current at the time of ordering the extra items after applying the tender deduction except on cost of departmental material. Tender excess if any, will not be applied.
 - iv) In the case of additional items, the rates shall be arrived on the basis of the departmental data rates current at the time of ordering the extra item or the date of commencement of extra item, whichever is earlier, after applying the tender deduction except on the cost of departmental material. Tender excess if any, will not be applied.
 - v) In case of extra items whether additional altered or substituted, for which the rates cannot be derived from

similar items in the contract and only partly from the departmental schedule of rates, the rates for such part or parts of items as are not covered in the schedule of rates shall be determined by the Engineer on the basis of the prevailing market rates giving due consideration to the analysis of the rates furnished by the contractor with supporting documents including contractor's profit. This shall be added on to the departmental rate (including contractor's profit) current at the time of ordering extra item, whichever is earlier for the other part of the item, for which rates can be derived from the schedule of rates.

vi) In the case of extra item whether additional, altered or substituted, for which the rates cannot be derived either from similar item of work in the contract or from the departmental schedule of rates the contractor shall within 14 days of the receipt of the order to carry out the said extra item of work, communicate to the Engineer the rate which he proposes to claim for the item supported by analysis of the rate claimed and the department shall within one month thereafter determine the rate on the basis of the market rate giving due consideration to the rate claimed by the contractor.

vii) In the case of percentage rate contract the rate for extra item shall be arrived at by applying the percentage excess or deduction to the departmental data rate as per the original schedule on which the tender were invited.

4. Wherever the term "Departmental data rate" appears It shall mean the rate derived from the departmental schedule of rates and shall include conveyance charges and contractor's profit.

f) In case in which the contractor executed extra items not contemplated in the agreement, but the rate of which require sanction of higher authorities the Division Officer may in such cases, sanction advance up to an amount not exceeding 75% of the amount for the item at the rate worked on and certified by the sub-division Officer. The Assistant Engineer shall in all such cases promptly record all authorised extra items executed by the contractor including - detailed measurements and quantities thereof in the Measurement Book. He shall neither enter any rate for the same in the measurement book nor include such extra items in the body of the bill, when the bill is received in the Sub-division, the Sub-division Officer shall prepare a separate statement for those extra items showing the items executed, quantity of each item rate for each item worked out by him based on agreement conditions and amount for each item on the basis of the rate worked out by him. He shall also a furnish certificate to the effect that..he has personally examined all the extra items and they are bona_fide the amount payable for those items will not be less than Rs.....

(amount to be specified and that there is no objection in paying 75% of this amount as a secured advance.) On receipt of the bill with the above statement and certificate, the Division Officer may make payment not exceeding the amount recommended by the Sub-division Officer a lump sum secured for work done but not billed for,

24. The contractor shall not without the previous , sanction in writing of the authority accepting the tender, execute any power of attorney in respect of any matter. Touching this contract, and any such power of attorney executed without such sanction shall not be recognised by or be binding up on the Authority or their officers. It shall be entirely within the discretion of the Authority accepting the tender either to grant such sanction or to refuse it or to revoke a sanction once given.
25. No part of the contract shall be sublet without written permission of the Executive Engineer nor shall transfer be made by power of attorney authorising other to receive payment on the contractor's behalf.
26. The Executive Engineer or other sanctioning authority reserves the right to reject any tender or all the tenders without assigning any reason therefore.
27. ~~Cement; M.S. rods, lead and hemp required for the work will be supplied departmentally from the District stores.....and their value recovered at Rs.....per bag of 50 kg. of cement and Rs.....per/kg. of M. S.rods Rs...../kg. of steel.....of lead and.....Rs/kg. of hemp.~~

Cement and rods as well as other material so issued shall remain the property of the Authority though in contractors custody and shall not be removed from the stores at work site except under written authorisation by a competent authority not less than the rank of a Assistant Engineer.

In case of M.S. rods the maximum wastage up to but not exceeding 5% may be allowed at the discretion of the Executive Engineer in charge of the work and the recovery will be made at the rates specified above.

28. Any other materials available in departmental stores if issued to the contractor will be recovered at book value or issue rate plus 20% supervision charges or market value or data rate whichever is higher. The fixing of market rate will be governed as per clauses
29. The contractor will be exempted from payment of seigniorage for rubble and metal quarried from K.W.A quarries exclusively for K.W.A. work. If the K.W.A quarries are not situated within a convenient distance from the site of the work, the contractor's quoted rates shall be inclusive of seigniorage ground rent, etc., that may be payable to the owners of private quarries.
30. In making payment the total amount of the bill will be rounded off correct to the nearest rupee if the amount is above Rs. 25 and to the nearest paisa if amount is below Ps. 25.
- 31 (a) When power rollers (which term includes steam and diesel rollers) are hired out to contractors, hire charges for the rollers (which include cost of lubricating oils, grease, small stores and establishment charges but exclude cost of fuel), shall be recovered at the rate for full period the roller is hired out to* the contractor, including non-working days, except for authenticated periods of break down of the roller for the full working hours of a day, that is 8 hours from 8 a.m to 5 p.m. (including one.hour's interval for lunch) and for Sundays and other public holidays, if there is no work on these days.
The daily rate of hire fixed by the Chief Engineer shall be for a day of 8 hours or part thereof, between 8 a.m to 5 p.m. with one hour's interval for lunch.

(b) If there is work on Sundays and other public holidays, the hire charges for the rollers, shall be recovered at

the rate of 1.20 times the rate of normal working days.

(c) When power rollers are worked on any day in excess of eight hours (that is outside the normal working day between 8 a.m. and 5 p.m) hire at the rate of 1.20 times the hourly rate applicable for that day (based on the rate for 8 hours) shall be levied for every extra hour or part thereof.

(d) The average out-turns excepted from a power roller for a day of 8 hours shall be fixed by the Chief Engineer K.W.A. for the various items of road work. A verification of plus or minus 1272% may be allowed to this average. If the daily out-turn from the roller falls outside the permissible variations, the contractor shall be charged at one and a half time the rate of normal hire for the day, specified for the roller concerned. However, this clause shall not be applicable in case where the variation is due to authenticated periods of breakdown of the roller inclement weather.

32. A. In addition to the hire charges necessary water split firewood, diesel oil, (fuel oil) or power line as the case may be required for the efficient working of the power roller, shall be supplied by the contractor at his cost.
32. Value of the departmental materials issued for the work either allowed to deteriorate or unaccounted for amounting as it does to an excess supply over the sanction requirements shall be recovered at book value or issue rate plus 20% supervision charges or market rate whichever is higher with sales tax and in addition specific penalty rate stipulated by the Authority. Market value will be the retail selling price of the materials in the locality of the work of the nearest market town current on the day of issue, or recovery rate which is more. The Executive Engineer shall obtain the information and record within 7 days of such issue, sending a copy to the contractor. The decision of the Chief Engineer regarding current market rates shall be binding on the contractor.

Unused balance if any at the time of completion or termination of the contract will not be accepted by the department. The cost of such material amounting as it does to an excess over sanctioned requirements shall be recovered at book value 4- 20% or current market rate whichever is higher and in addition to specific. Penalty rates as may be fixed by Chief Engineer in the form of Departmental Circular order from time to time shall also be recovered at the direction of Executive Engineer,

33. Tenderers should declare that they are not related to any Authority Officer who is in charge, control of the work. Relationship in this will be restricted to father, mother, son, daughter, brother, sister, direct uncle, nephew, father-in-law, brother-in-law, mother-in-law, sister-in-law and first cousin of the officer concerned. If the above condition is found to have been contravened when they tender the earnest money security deposit of the tenderer/tender will be forfeited and the contract entered into **will** stand cancelled.
34. The contractor will provide his own tools and plant, store sheds to stores his own materials as well as those supplied by the department and will be entirely responsible for the proper use and safe custody of the latter and also for any loss, damage, theft, mishandling, weathering or any cause whatsoever.
35. In case of schedule rate contract, if different rates are quoted for the same specification of work under identical working condition at the same site/in different appendices of the schedule the lowest quoted rate will be accepted for the items in all the appendices.
36. The contractor shall be responsible for the safety of the labour employed by him and he shall be liable to pay the necessary compensation in case of accidents, as per the workmen's Compensation Act.
- The contractor will also be liable to abide by the fair wage clause condition attached separately.
37. Empty bags of cement used on the work should be returned to the departmental stores failing which the value of empty cement bags will be recovered at rates fixed by the department from time to time
38. If the department undertake to supply particular materials no claim for extra payment on account of delay in the supply of materials will be entertained.
39. In the case of construction of steining to wells, excessive tilts if any occurring to the extent which is more than the percentage allowed as per rules will have to be rectified by the contractor at his own cost and if the contractor fails to attend to the same it will be got attended to by other agency and the cost thereof recovered from the original contractor.
40. The contractor should take a licence under the current explosive rules to enable him to manufacture and possess the quantity gun powder required by him for -blasting if necessary.
41. The contractor shall employ engineering personnel as detailed below for a period of one to two years according to the tenure of the contract paying Rs. 250 p.m. and Rs. 150 p.m. to the engineering graduates and Engineering Diploma Holders respectively.

Cost Work executed	No. of personnel to be employed
For works costing Rs. 2 lakh upto Rs. 5 lakhs.	One Engineering Diploma Holder
For works, costing from Rs. 5 lakhs upto Rs. 10 lakhs	One Engineering graduate and one Engineering Diploma Holder
For works costing over 10 lakhs	One Engineering graduate and two Engineering Diploma Holders

42. Tenders which are not in conformity with this tender notice are liable to rejection.
43. This Tender notice with the conditions stated herein will form part of the contract documents.
44. In the case of schedule contracts when the rates quoted for a particular items in figures and words disagree, the rates quoted in words will be taken for the purpose of the settlement of the contract. The contractor is bound to accept this rates if the contract is awarded to him. Similarly in the case of percentage rates contract when the overall percentage rates quoted in figures and words disagree, the rates noted in words will be taken for the purpose of the settlement of the contract. The contractor is bound to accept these rates if the contract is awarded to him
45. The entries in tender schedule issued by the department is in no way to be corrected by the tenderers and if the tenderers have to note anything, they should note the same as a foot note in the bottom of the page if any correction in made by the tenderer in the tender schedule the tenders are likely to be rejected.
46. In the case of the percentage rate contract the overall percentage rate quoted by the contractor shall not be varied on any account whatever arid it shall hold good for all items done irrespective of variations in quantities
47. The quantities provided for in the schedule may vary widely and contractor should be prepared to do any excess over the schedule quantities at his quoted rates for the work.
48. It shall be accepted as a condition of contract that the landed property or bank deposit based on which the solvency certificate was issued by the Revenue Department and produce during' the time of Registration will not be alienated during the period of contract without the permission of Government *wide* GO (P) No. 136/74 PW, dated 8th August 1974.

SPECIAL CONDITION

1. All works shall be done in conformity with the specification and condition in the contract in force in the K.W.A. The tenderer shall quote only single rate as an overall percentage above or below **or, at** the rates given in the schedule by a single entry at the bottom of the schedule under the head "quoted rate of the contractor" by scoring out the irrelevant portion and attesting all the corrections. The rate quoted shall be inclusive ones covering all the operation contemplated in the specification and tender schedule and all incidental work necessary for such operations such as shoring, bailing from work, scaffolding etc. The rates quoted shall be inclusive of sales tax.
2. The rates quoted by the contractor for the various items shall be inclusive of all tools and plants required for the proper execution of the work and all *other* incidental charges and separate claim for these will not be entertained under any circumstances.
3. The quantities shown in the schedule are only approximate and are subject to variations and the contractor is bound to do additional quantities of work if found necessary at his quoted rates.
4. All the rates quoted should be inclusive of sales tax also.
5. All corrections and insertions in the original. tender or schedule whether in the printed matter or elsewhere shall be attested by the tendered
6. The contractor has to quote for the specification and unit noted in the schedule. No correction or specification unit or quantity is admissible and if they make any correction in the specification, etc. the same will be rejected. If they have to note anything, they shall not the same as a foot note at the bottom of the page.
7. The earnest money deposit receipt should attach to the tender properly pledged, lest the tender will be rejected.
8. The contractor should note his Division Register Number and amount of permanent earnest money deposited by him in his tender.
9. The contractor should produce the declaration in the form attached.
10. The contractor is bound to carry out items of works which are not expressly or impliedly described in the tender schedule, plans, specifications and agreement but which are found necessary for the proper completion of the work during execution payment for such extra items will be made on the basis of extra item conditions vide clause 23 (e of Form No. GWD 83).
11. For L.S. items the contractor will be paid only for the actual quantity of work done or materials supplied and

labour engaged at agreed rates for such items and as per condition No 10 above for extra items but such payment will be limited to the lump sum quoted by the contractor. If he fails quote definite L.S. rates for such items the L.S. amount provided in the schedule will be operative in his case.

12. Roofing tiles, hip tiles, wire cut bricks, surki etc. required for the work should be purchased from suppliers approved by the stores purchase Committee.
13. Bitumen required for the work will be supplied departmentally at the division store.....The empty bitumen drums should be returned to the division store in good condition otherwise there cost at..... plus sales tax per drum with cost of bitumen will be recovered from the contractor.
The contractor shall return the empty bitumen/ tar drum^ in an acceptable condition to the Executive Engineer Empty tar/ bitumen drum in which the top lid alone is cut opened and removed will be treated as acceptable to the Executive Engineer. In all other cases when the drum\$ are cut in irregular shape or in pieces a penalty of Rs. 10/- per empty bitumen drum in addition to the value of Rs. 15/- per drum will be recovered from the contractor.
14. For materials issued for the work but not used and not returned to the store sale tax at the prevailing rates will be recovered in addition to the departmental recovery plus 20% storage.
15. For cement and M.S. rods issued for the work but not used a penalty of Rs.22.00 per 50 kilograms of cement and Rs.2.80 kilograms of M.S.rods will be recovered in addition to the value plus 20% storage and sales tax.
16. It will be the responsibility of the contractor to obtain necessary land for stocking the materials for arranging the work.
17. Metal of the required sizes alone should be brought to the site of the work. Breaking boulders or rubble in to a metal will not be allowed either on or the side of the road. Metal should be stocked on one side of the road only and in such a way as not to cause any hazards to traffic. The stocks should be formed as per the standard profile current in the department.
18. Granite stone metal supplied should be sound hard tough and durable; free from any decayed mater and of uniform colour and texture. Each piece should have sharp angular edges. The metal should not also contain any quarry dust or earth.
19. Silicious gravel shall consist of only hard nodules not more than 40 mm not less than 6 mm dia in any direction, scraped from the hill sides and free from admixture of earth or laterite chips.
20. Sand supplied should be clean, sharp and gritty to the touch free from clay and other impurities and obtained from running water courses.
21. Variation in supply in each 200 meter length exceeding 1% from the approved indent will not ordinarily be allowed. But supplies above 1% over the stipulated Quantity in the particular 200 meter length may be accepted at the discretion of the Executive Engineer and in that case such will be paid at $\frac{3}{4}$ of the agreed rate. Similarly if supplies fall short by more than 1% recovery for this deficiency will be made at $\frac{1}{4}$ of the agreed rates. Excess supplies or deficiency in supplies over 10% however will be accepted only at the discretion of the Executive Engineer subject to its being penalised at half of the agreed rates. The maximum penalty shall however be limited to 10% of the contract.
22. The contractor will have to make his own arrangements to convey the materials supplied by the department and for tracking of materials and site shed etc. which are found necessary for the proper execution of the work. He will also responsible for the safe custody of materials till they are used on works.
23. The contractor should take out licence for storing gun powder and explosives required for rock blasting as per Explosive Act, 1940.
24. Empty cement bags should be returned to the departmental store failing which its cost at Rs.....1..... per bag will be recovered towards value with the usual sales tax,
25. Recovery for M.S. rods shall be affected at agreed rates for the quantity actually used plus wastage, if any the percentage of wastage will be fixed by the Executive Engineer, but any rates it should not exceed 5 per cent of the actual usage.
26. If the Authority undertake the supply of any materials, no claim for extra payment due to delay in supply of those materials will be entertained.
27. If materials other than those specified in the tender are issued by the Authority recovery will be effected at data rate plus storage plus sales tax or at current market rates at the time of issue whichever is higher.
28. Hire charges of tar boiler and sprayer it supplied departmentally will be recovered Rs.5/- per day for the whole period they are in the custody of the contractor.
29. Machinery like concrete mixer, pump set etc. If available will be supplied by the Authority as per rules and hire charges recovered from the contractor at the prevailing departmental rates. The contractor has to take the machinery from the store and return to the same spot at his cost and responsibility.
30. A day means 8 working hours for purpose of calculation of hire charges of rollers, pump sets and other machinery unless otherwise specified.

31. The contractor has to take the roller from the and return it to the same spot at his own cost and responsibility.
32. a) When power rollers (which term includes steam and diesel rollers) are hired out to contractors, Hire charges for the rollers (which include cost of lubricating oils, grease, small stores and establishment charge but excludes cost of fuel), shall be recovered at the rate of Rs..... per day of eight hours or part thereof, for the full period the roller is hired out to the contractor including non-working days, except for authenticated periods of break down of the roller for the full working hours of a day (that is 8 hours from 8a.m. to 5p.m. including one hour's interval for lunch), and for Sundays and other public holidays, if there is no work on these days.

(The daily rate of hire fixed by the Chief Engineer shall be for a day of 8 hours or part thereof, between 8a.m. and 5p.m. with one hour's interval for lunch).
- b) If there is work on Sundays and other public holidays the hire charges for the roller, shall be recovered at the rate of 1.20 times the rate for normal working days.
33. a) When power rollers are worked on any day, in excess of eight hours (that is outside the normal working day between 8a.m. and 5p.m. (hire at the rate of 1.20 times the hourly rate applicable for that day based on the rate for 8 hours) shall be levied for every extra hours or part thereof.
- b) The average out-turn expect from a power roller for a day of hours is as fixed by the chief Engineer B&R for various items of road work. A variation of plus or minus 127% may be allowed to this average if the daily out-turn from the roller falls outside the permissible variation, the contractor shall be charged at 1V₂ times rate of normal hire for the day specified for the roller concerned. However, this clause shall not be applicable in case where variation is due to authenticated periods of break down of the roller or inclement weather.
- c) In addition to the charges, necessary water, split firewood, diesel oil, (fuel/oil) or power line as the case may be required for the efficient working of the roller shall be supplied by the contractor
34. If part payment is claimed for metal supply; 75% of the supply will only be made in the part will. The spreading and consolidation should be done within two months of supply.
35. The payment of the earth work items will be made as per level measurements or tape measurements as per rules prevailing in the Authority.
36. All items should be carried out as per the relevant specification in the M.D.D.S; and all clauses of preliminary specification should be complied with.
37. The moulds shuttering etc. required for the work should be made by the contractor and got approved by the Authority office at site before use.
38. Tribes of the locality should be employed to the extent possible. The contractor should pay fair wages to the labour engaged on the work which will be fixed by the Government as specified in GO. 18-8597/55 LD dated 7th march 1956 and any dues to the labour will be recovered from his bill as fixed by the departmental officers.
39. The contractor alone is responsible for the safety of his labourers and damages, if any payable under "Workmen's Compensation Act" will be to his debit
40. It shall be the contractor's responsibility to protect the public and his employees against accident, from any cause during execution of the work and he shall indemnify the Authority against any claims for injury to person or property resulting from any such accident, and he shall, where provisions of the "Workmen's Compensation Act apply" take steps to properly insure against any claims there under.
41. The contractor shall be liable for any loss caused to the Authority on account of the above work including any that may arise due to non-fulfilment of the contract. He should comply with the rules laid down in the KWA contract regulation regarding fair wages.
42. The work shall be completed in. all respects and also at the rate of progress within the time limit and stipulation in the Form No.83 notice inviting tender Failing which the extractor's liable to be fined as stipulated in special condition No.49
43. Defects if-any noticed within 3 months (6 months in the case of road works) from the date of completion of the work will be got rectified by the contractor, in default of which this will be attended by the Authority and the cost made good from the contractor.
44. The contractor should produce latest sales tax and agriculture income tax clearance certificate and also income tax clearance for receiving final payment.
45. The contractor shall be responsible for the payment of sales tax as per rules in force from time to time and the rates quoted for various items remain unaffected by any changes that may be made from time to time in the rate it which such tax is levied sales tax, agriculture income tax and income tax due to Government from the contractor will be recovered from his bill for the work as per the advice of the authorities concerned.
46. All sums due to the Authority under or by virtue of this contract shall be recoverable first from the security furnished by the contractor and if the same is found insufficient. Such deficit amount shall be recoverable under the provisions of the Revenue Recovery Act for the time being in force as though the same were arrears of Land Revenue or in any other manner as the Authority deem fit.

47. The contractor agrees that before final payment shall be made on the contract he will sign and deliver to the Executive Engineer either in the measurement book or otherwise as demanded a valid release and discharge from any and all claims and demands whatsoever for all matters arising out or connected with the contract. Provided that nothing in this clause shall discharge or release the contractor from his liabilities under the contract. It is further expressly agreed that the Executive Engineer is supplying the final measurement certificate need not be bound by the proceeding measurement and payments. The final measurement, if any, of the Executive Engineer shall be final, conclusive and binding on the contractor.
48. The tender notice and Form No.83 notice inviting tender shall form part of the agreement.
49. The date fixed by the Superintending Engineer for the commencement and completion of works, as entered in this agreement shall be strictly observed by the contractor who shall pay damages at the rate of (1) one% on the estimated value of the contract for every day not exceeding five days that work remains uncommenced or unfinished, after the proper data *and* further to ensure good progress during the execution of works, the contractor shall be bound unless the contract provides otherwise in all cases in which the time allowed for a work exceeds one month to complete. One fourth of the whole work to be done when one fourth of the whole time allowed for it has elapsed, one half of the work when one half of time has elapsed and three fourth of work when three fourth of time has elapsed and the penalty for the failure in either of these cases shall likewise be that the contractor shall be subject to pay, daily damages at the rate of (1) one% on the estimated value of the amount of work that should be completed by that time provided always that entire amount of damages to be paid under the provisions of this clause shall not exceed in the whole amount of retention plus the security deposit. All damages payable under the provisions of this clause or clause 12 of the conditions of contract shall be considered as liquidated damages to be applied to the use of this Authority without reference to the actual loss sustained owing to the delay.
50. If during execution, the proportion of usage of materials issued departmental is varied for which the price has been fixed in the tender, the quoted rate of the item will be allowed effecting short or excess of departmental materials actually used as well as labour charges for handling the short or excess if any provided in the same position.
51. The earnest money deposit of the unsuccessful tender will be refunded immediately after tabulating the tenders keeping only the earnest money of the first three lowest tenderers two unsuccessful tenderer will be refunded within a week from the date of acceptance of tenders.
52. The contractor should engage at his own cost a diploma holder (Civil Engineering) with sufficient practical experience of works costing from Rs. 2 lakhs to 5 lakhs and one engineering graduate and one diploma holder (Civil Engineering) for works costing Rs. 5 lakhs up to 10 lakhs and one Engineering graduate and two diploma holders for works costing over 10 lakhs for one or two years according to the tenure of contract paying Rs. 250 p.m. and Rs. 150p.m. to Engineering graduate and diploma holder respectively.
53. All other conditions and specifications of contract are the same as those current in the Authority.
54. The method of measurement will be as per Indian Standard 1500-1958.
55. All concrete should be machine mixed and vibrated.
56. The tenderer/ contractor must clearly understand that the settlement of claims either by part bills or by final bill will be made only according to the availability of budget provision and allotment of funds made with the Divisional Officer in charge of the work under the respective head of account in which the work is sanctioned and arranged and also subject to the seniority of such bills. No claim for interest or for damages whatsoever shall be made for the belated settlement of claims of bills. No such claims shall be admitted by the Government

Additional Condition for Supply Pipe

1. All materials shall be supplied by the contractor in a phased manner as per the phased supply schedule prepared by the agreement executing authority. Quantity and time of each supply shall be specifically mentioned in this schedule in tune with the time of completion.
2. Schedule for phased supply of pipes and specials shall be prepared by the agreement executing authority based on the following criteria.
 - Targeted progress of pipe laying works.
 - Availability of permission for pipe laying
 - Permission from other agencies (PWD, NH, NHAI, KSTP, KRFB, Corporation, Panchayath etc.) for laying pipes.
3. Each supply of material shall be done by the Contractor only after getting written instruction from the Executive Engineer concerned.
4. The Executive Engineer in-charge shall direct the Contractor to place supply order in each phase after evaluating actual progress of laying of pipes supplied in the previous phase.
5. Agreement executing authority shall have the authority to modify the schedule for phased supply of remaining materials during the progress of work. If there is variation from the targeted progress.
6. On each supply supply, Contractor may submit bills for materials supplied not exceeding 80% of estimate rate/quoted rate of materials, whichever is less.

Based on the resolution, all the tendering officers are hereby directed to include clauses 9.14.1.1 to

9.14.1.6 to the Mother NIT of Kerala Water Authority and the modified NIT shall only be used in all future tenders.

9.14.1.1 All materials shall be supplied by the contractor in a phased manner as per the phased supply schedule prepared by the agreement executing authority. Quantity and time of each supply shall be specifically mentioned in this schedule in tune with the time of completion.

9.14.1.2 Schedule for phased supply of pipes and specials shall be prepared by the agreement executing authority based on the following criteria:

- a) Targeted progress of pipe laying works.
- b) Availability of permission from other agencies (PWD, NH, NHAI, KSTP, KRFB, Corporation, Panchayath, etc.) for laying pipes.

9.14.1.3 Each supply of material shall be done by the Contractor only after getting written instruction from the Executive Engineer concerned.

9.14.1.4 The Executive Engineer in-charge shall direct the Contractor to place supply order in each phase after evaluating actual progress of laying of pipes supplied in the previous phase.

9.14.1.5 Agreement executing authority shall have the authority to modify the schedule for phased supply of remaining materials during the progress of work, if there is variation from the targeted progress.

9.14.1.6 On each supply, Contractor may submit bills for materials supplied not exceeding 80% of estimate rate/quoted rate of material, whichever is less.

FAIR WAGE CLAUSE

- a) The contractor shall pay not less than fair wage to labourers engaged by him on the work.

"Fair wage" means wage whether for time or piece work notified at the time of inviting tenders for the work and where such wages have not been so notified, the wage prescribed by the KWA for the District in which the work is done.

b) The contractors shall not-withstanding the provisions of any contract to the contrary cause to paid a fair wage to labourers indirectly engaged on the work including any labour engaged by his sub-contractor in connection with the said work as if the labourers had been immediately employed by him.

c) In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of his agreement the contractor shall comply with or cause to be complied with (the General P.W.D. Contractor's labour) regulations made by Government in regard to payment of wages, wage period, deductions from wages; recovery of wages not paid and deduction unauthorised made maintenance of wages register, other terms of employment, inspection and submission of periodical returns and all wage cards publication of scale of wages and return and all other matters of a like nature.

d) The Executive Engineer or Sub-Division Officer concerned shall have the right to deduct from the money due to the contractor and any sum required or estimated to be required for making good the loss suffered by a worker or workers by reasons of non-fulfilment of the conditions of the contract for the benefit of the works, non-payment of wages or deduction made from his or their wages which are not justified by their terms of the contract or non-observance of the regulations

e) Vis-a-vis Central Government, the contractor shall be primarily liable for all payments to be made under and for the observance of the regulations aforesaid without prejudice to his right to claim from his sub contractors.

f) The regulation aforesaid shall be deemed to be a part of his contract and breach thereof shall be a breach of this contract.

CLAUSE 45 OF M.D.S.S. Accidents- Boarding-Lighting-Observations-

Watchman

a) When excavations have been made or obstacles have been put in public through fares or in place where there is any likelihood of accidents, the contractor shall comply with any requirement of law on the subject and shall provide suitable boardings, lighting and watchman as necessary.

b) It shall be the contractor's sole responsibility to protect the public and his employees against accident from any cause and he shall indemnify the Authority against any claims for damages for injury to person or property, resulting from any such accidents and he shall, where the provision of the Workmen's Compensation Act applies, take steps to properly insure against any claims there under.

c) On the occurrence of an accident which results in the death of any of the workman employed by the contractor or which is so serious as to be likely to result in the death of any such workmen the contractor shall within 24 hours of the happening of such accidents, intimate in writing to the concerned Section Officer of the Authority the fact of such accident. The contractor shall indemnify the Authority against all loss or damage sustained by the Authority resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or fines if any payable by the Authority consequence of Authorities failure to give notice under the Workmen's Compensation Act or otherwise conform to the said Act in regard to such accident.

d) In the event of an accident in respect of which compensation may become payable under the workman's Compensation VIII of 1923 whether by the contractor or by the Authority as principal it shall be lawful for the Executive Engineer to retain out of money due and payable to the contractor such sum or sums money as may in the opinion of the said Executive Engineer be sufficient to meet such liability. The opinion of the Executive Engineer shall be final in regard to all matters arising under this clause.

FORM OF DECLARATION

1. I.....do hereby declare that none of my relations as per the list given in Section 6 and Schedule A of the Companies Act, 1956 is in charge of the above work or are having control over it.

2. I.....;.....do hereby distinctly and expressly declare and acknowledge that I have read the Madras Detailed Standard Specifications

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and the preliminary specification therein.

Contractor

NOTE:-If the Contractor is found at any stage to have suppressed any information required, his earnest money for the work is liable to be forfeited and the contract entered into, will stand cancelled.

SUPPLEMENTARY SPECIFICATON FOR LATERITE MASONRY

- 1. **Laterite Stone** : The stone shall be of the best procurable free from admixture of the white earth. If possible this shall be dug from the quarry some time before use and allowed of harden before putting in to the work. All stones shall be hard and uniform in colour.
- 2 **Size** : The stone shall be quarried true and square to the shape and size or as ordered by the Executive Engineer. The least thickness shall be 6" and the breath of the stones shall not be less than thickness.
- 3. **Laying** : The stones shall be laid on the work with the headers and structure in the alternative courses and arranged to break joint at least 3" shall be laid on an even bed of mortar, lime or cement as the case may be, the thickness of joining not exceeding half an inch. In other respects, the masonry shall be similar to the other classes of stone masonry as detailed in the 1VLD.S.S. No. 36 or II.
- 4. The colour of the paint to be used will be specified by Executive Engineer at site of the work and the paint to be used should be got approved by him before they are used on the work.

AMENDMENT C.S.No 3167

Clause: 2

"The Executed Executive Engineer shall also have power to measure up the work contractor one to take such part thereof shall be unexecuted out of his hands and to give it to another contractor to complete in which case any expense which may be incurred in excess of the sum, which would have been paid to the original contractor if the whole work has been executed by him (of the amount of which excess the certificate in writing of the Divisional Officer shall be final and conclusive) and borne and paid by the original contractor and may be deducted from any money due to him by the Authority under the contract otherwise or from his security deposit, or the proceeds of sale thereof or sufficient part thereof ".

SPECIAL CONDITION

- 1. **Form Work:** The form work for taking reinforced concrete shall be preferably of steel. It shall be absolutely rigid enough to as to ensure casting of the structure of perfection. On either case, the contractor shall get the type of form work and concreting approved before-hand by the executive Engineer.
- 2. **Concrete:** Test samples of concrete used in plain or R.C. work shall regularly prepared and tested according to the standard method at the cost of the contractor. The test result shall be promptly reported for orders of the Executive Engineer and for systematic record by the officer's of the department.

FORM OF NOMINATION

I,.....do here by
nominate and authorise

Sri.....son/
daughterof.....aged.....years of.....

.....house.....village.....

.....taluk.....district, residing

at.....

to receive all or any sums found due to me under the term of contract (Agent No and details of contract) in the event of my death before the amount has become payable, or having become payable, but has not been paid.

In the presence of witness

1. Name Address Signature

2. Name Address Signature

Signature

Name

Address

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SPECIAL CONDITIONS

1. The contractor shall examine if there are any gas mains, electric or phone cables, water mains sewers, covered drains etc., coming in the line of the trench and shall not excavate in such localities before such mains, cables or sewers are diverted or otherwise arranged for.
2. The contractor shall be responsible for any damage which may be caused to power or phone cable or to any buildings walls or pipes etc., nearby on account of the excavation of the trench due to insufficient or lack of shoring, or due the result of bailing or pumping or stagnation of water. The contractor shall make his own arrangements for supporting electric and telephone posts, electric and telephone cables during excavation and no extra payment will be given for this.
3. The contractor shall examine and satisfy himself that the bed and sides of the trenches are firm and suitable for laying the pipes. Should any portion be found unsatisfactory by him the contractor shall bring it to the notice of the Officer-in-charge in writing and on receipt of the letters/orders take necessary steps to make the trench firm and suitable for laying pipes.
4. The trench properly prepared shall be in advance of the pipe laying by at least 100 meters for Inspection.
5. The departmental materials issued to the contractor shall be taken charge of at the departmental pipe dumps or stores by the contractor after the satisfying himself about their good condition and granting receipt to the Officer - in-charge. The contractor shall be responsible for the safe custody of all the materials taken charge by him subject however to the direction and control of the Officer-in-Charge for the purpose of inspecting, weighing or testing the pipes and materials as shall see fit to do.
6. All pipes, specials, valves etc. shall be transferred and deposited adjacent to their final position on the work where they are to be used at such time as the Officer-in- charge considers proper. This will usually be just before they are to be laid in the trenches a| it is not intended that they should be left the line about the roads longer than in absolutely necessary.
7. The pipes, specials, valves etc. shall be handled very carefully during loading unloading conveyance and lowering operations as per the direction of the departmental officers under their approved modes and with approved implements.
8. If any of the departmental materials issued to the contractor in good conditions becomes thereafter, damaged before when or after being placed in the work, the contractor shall pay for the damage at rates fixed by the department as per rules in force.
9. No payment will be made for additional pumping for bailing out water that may be required due to the fault of the contractor by way of inefficiency or delay in carrying out the works defective work etc.
10. The laid pipelines should be tested in suitable lengths fixed by the department. The testing of pipeline has to be done under the immediate presence of the Section Officer and Sub-Division Officer of the Department in charge under their directions.
11. If tests show any defect in the work, such portion has to here done and got retested so satisfaction at the contractor's cost.
12. If for lack of specials after commencing the work, pipes have to be laid with open ends, they have to be closed by wooden planking at no extra cost by the contractor.
13. All the specifications for earthwork trenching, refilling shorting , receipt, transport and custody of materials, conveyance to work site, laying testing etc. for cast iron pipes as provided in the M.D.S.S. shall apply to A C pipes also deleting irrelevant clauses.
14. All the specification for earthwork trenching, refilling shoring, receipt, transport and custody of materials, conveyance to work site testing etc. for cast iron pipes as provided in the M.D.S.S. shall apply to pre-stressed concrete premo pipe also deleting irrelevant clauses.
15. The rate for bailing out water with engine pump set included in the schedule is inclusive of the following items (1) Hire charges of the engine pump set (2) Cost of H.S.D. Oil. (3) Cost of lubricating oil and other stores. (4) Pay of the Driver and Cleaner.(5) Installation charges etc. If any of these items are supplied by the Department necessary recovery towards their cost will be affected from the contractor's bill.
16. (Vide Order No. KWA/Plg./18116/90 dated 15-10-1990 of the Managing Director, Kerala Water Authority, Trivandrum)

From the 'on account' payments deductions shall be made by the Authority at the rate 1% of the amount of bill less that of departmental materials supplied towards contribution to the KERALA CONSTRUCTION WORKERS' WELFARE FUND BOARD.

ADDITIONAL SPECIAL CONDITIONS

I GENERAL

1. The pipes will be issued departmentally free of cost from the nearest departmental store. The contractor shall arrange to convey the pipe from the pipe dump to the work site carefully without breakages or damages to the pipe.
2. Pig lead and hemp required for joining pipes will be supplied departmentally at the stores.
3. The contractor shall be responsible for any damages to the pipes specials, valves or any other articles which have been handed over to him in good condition. In case if any articles issued to the contractor is found to have been damaged, the cost of making good the damages or the recovery rate of articles as may be fixed by the Executive Engineer shall be

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release from the contractor.

4. Caution boards shall be fixed at both sides of the trench where wheeled traffic is allowed. In this case, fencing shall be provided all along the trench on the traffic side about 1.00 M from the edge of trench.
5. Road-closed boards shall be closed at both ends of the street when the road is closed entirely for traffic. In this case a fence across the streets shall be provided with small passage for pedestrians. Red flags during day and three red light during night shall be provided across these fencing.
6. Fencing shall be with strong bamboos or wooden post to a height of 1.40M above the road level with verticals 2.40 M apart and 3 rows of battens tied across
7. Danger lights shall be provided from 6 p.m. to 6 a.m. all along the trench not more than 50 M apart and at all street crossing and gangways. Sufficient number of watches shall be employed to maintain the lights throughout the night.
8. In metalled roads, the existing road metal shall be removed and deposited separately from the excavated earth and shall be refilling the trenches, with welding materials according to the necessity and the surface restored.

II Specification for conveying Laying and Jointing cast iron pipes

1. **Conveying:** The pipes shall be conveyed carefully in specially mad carts to the work site before excavation is commenced and shall be stacked along the line on one side of the trench.
2. **Pipe to be cleaned:** AH pipes before lowering into the trench shall be brushed, washed and gleaned, inside and outside. The inside of the socket and outside of the spigot ends shall be specially scrapped, rubbed, brushed and cleaned so that jointing materials may adhere solidly to the metal.
3. **Preparation of trench:** As already described for stoneware pipes the bottom of the trench shall be carefully levelled and graded with the boning rods, and the site rails, scoping the middle portion of the trench to the exact curvature of the pipes.
4. **Pipe Laying :** The pipes shall them be lowered into the trenches and laid with the socket facing inflow. The spigot end of the pipes shall be well rammed home into the socket of the pipe already laid. The pipes so laid should be truly concentric straight and to the exact levels and gradient which shall be, verified and adjusted as each pipe is laid
5. **Jointing :** After carefully adjusting the pipes to the required grade and level they shall be made firm by filling the sides and packing it well . The socket-pits shall them be excavated to the required dimension.
6. **Testing:** When a section of pipe is completely joined, it shall be tested to a head of 7.50 inland any faulty joint if observed shall be re-caulked and rested until the joints do not show any sign of sweating. The tests shall be conducted with a test pump or static head and the pressure must stand without any fall for 30 minutes.

The contractor shall adhere strictly to the specification of the tender schedule.

Contractor

Executive Engineer