

**KOLLAM DISTRICT CO-OPERATIVE HOSPITAL
SOCIETY LTD Q 952**

**TENDER FOR
CONSTRUCTION OF RESTAURANT BUILDING
AT NS MEDILAND**

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INVITATION OF TENDERS

Sealed tenders are hereby invited for executing the following work as per the details given below.

1. Name of work:- Construction of Restaurant building at NS Mediland, Palathara
2. Last date and time for receiving completed Tenders: 26.12.2024., 3 pm
3. Date and time of tender opening: 26.12.2024., 4 pm.
4. Place of Submission of Tenders:

N.S. MEMORIAL INSTITUTE OF MEDICAL SCIENCES, KOLLAM.

Owner

Kollam District Co-operative Hospital Society Ltd Q952

NH Bypass Road, Palathara, Thattamala P.O, Kollam - 691 020
Phone : +91-474-2724823
E-mail-nsmimskollam@gmail.com

This tender document is issued to: M/s.

Issued by:

Date:

TENDER PARTICULARS

1.	Name and address of owner	Kollam District Co-operative Hospital Society Ltd Q 952, NH Bypass Road, Palathara, Thattamala P.O, Kollam - 691 020
2.	Name of work	Construction of Restaurant Building at NS Mediland
3.	Site of work	Palathara, Kollam.
4.	Completion period	Four month
5.	Type of tender	Item Rate
6.	Rate	The UNIT RATE shall be all inclusive. It shall include cost of material, import duties, other duties & taxes, GST, all cess, tools and plants, transportation, freight, insurance, storage, incidental expenses, loading / unloading, shifting in position with required hoists and equipment, scaffolding, labour, night labour, wastage, contractor's profit, installation, testing, commissioning and other works required.
7.	Rate variation	The RATE shall be FIRM throughout the period of contract.
8.	Tender validity period	45 days.
9.	Warranty/defects liability period	Twelve (12) months.
10.	Earnest money deposit (EMD)	50,000/- DD pay order in favour of Kollam District Co-operative Hospital Society Ltd. Q 952
11.	'Security Deposit' during execution of work	5% of the total contract value in the form of Bank Guarantee or Demand Draft.
12.	Retention amount	10 % against each running account bill limited to 5% of contract agreement amount
13.	Deductions	All statutory deductions will be made from each bill.
14.	Payment	3 Payments
15.	'Performance Security' during warranty period	5% of the total executed value in the form of Bank Guarantee or Demand Draft.

INSTRUCTIONS TO TENDERERS

1. Tenderer shall read all the pages of the tender document in detail and their authorized signatory should sign with their official seal on all the pages.
2. The tender document comprises of following documents. This document along with articles of agreement and other documents as may be mutually agreed upon shall form part of the contract agreement to be entered into between the contractor and the owner and the other parties involved in the work.
 - a) Invitation of Tenders.
 - b) Tender particulars.
 - c) Instructions to Tenderers.
 - d) General Conditions of Contract (GCC).
 - e) Form of Agreement.
 - f) List of Approved Makes.
 - g) Schedule of quantities and rates.
 - h) Drawings.
3. The complete tender document dully filled in and signed shall be submitted along with all supporting documents..
4. No pages of the tender document shall be removed or modified.
5. Any comment that the tenderer desires to make shall not be written on the tender document.
6. Tender should be willing to complete the entire scope of work within the specified time.
7. The right of acceptance the tender shall remain with the Owner who does not bind himself to award the work to the lowest tender. No details or reason shall be furnished to any person or organization or statutory body for the rejection or acceptance of any tender.
8. The right for acceptance of the tender in part or whole or the right to employ different contractors for separate work rests solely with Owner.
9. The Tenderers shall verify and study all the drawings related to the work and all the Tenderers shall sign the same with their official seal and submit it along with the tender.
10. Tender documents shall be placed in a sealed envelope super scribed with the description of the work, last date and time for receiving the tenders, Name and address of the Tenderer.
11. Earnest money deposit, if called for, should be enclosed in a separate sealed cover in the form of a Demand draft favoring the Owner and subscribed 'Earnest Money Deposit'.
12. If it is proved that two or more persons connected with one another either financially or as a principle or agent for one another have tendered under different names for the same contract without disclosing their relationship, then such tenders will be rejected and their Earnest Money Deposit will be forfeited.
13. Owner will not be responsible for or to pay any losses or expenses incurred by the Tenderer for the preparation and submission of the Tender.
14. Tenderers will be permitted access to the site of the work for inspection during tender period which may be arranged on request to the Owner.
15. If the Tender finds any discrepancy, omission, and ambiguity of conflict in the document or is in doubt as to the interpretation and meaning, it should be immediately brought to the attention of the owner.
16. Tenderers should submit detailed computations showing the figures on which the units and

overall rates are based if so requested by the owner.

17. Tenderers should write the rates both in numerical figures and word. If any difference is found between the two, the value in words will be considered as correct.
18. Tenderers should quote for all items indicated in the schedule of quantities of the tender document. Incomplete tenders are liable to be rejected.
19. The successful tender (Contractor) will have to enter into a written contract agreement (as per the attached articles of agreement) with the Owner on the terms and conditions of the contract which will form part of the contract document. The contract will be considered valid only after the above agreement is signed by both the parties.
20. The tender document should be accompanied by the following documents if called for. Absence of any of the following will cause the Tender to be rejected.
 - a) Valid Income tax Clearance certificate and Sales tax clearance certificate.
 - b) Evidence showing experience of identical or similar work stating description, Location of the site with telephone numbers, Name of the Owner, Nature of the contract whether it involves supply of materials or labour charges only, Date of completion, Date of award of Contract, Value of the work, Rating and connected load of the Installation etc.
 - c) List of tools and machinery.
 - d) List of technical staff employed by the tenderer.
 - e) Testimonial from major owners, if any.
21. The owner reserves the right to award the work to one or more tenderers in part or in full.
22. The quantities given in the tender are merely for the guidance of the tenderer and may vary as either side upto any extent during actual execution. Some of the items may be added, deleted, omitted or altered during actual execution of the work. No claim whatsoever shall be entertained on account of variation in quantities. Speculative tender is liable to be rejected.
23. The Tenderers shall have to quote for the all the items in the schedules of quantities of the tender document. In complete tenders are liable to be rejected.

GENERAL CONDITIONS OF CONTRACT (GCC)

General Conditions of Contract (GCC) shall be read in conjunction with Technical specification, Drawings, Schedule of quantities and other documents forming part of this document wherever the context so requires.

1. Conditions to override GCC incase of variance

Where any portion of the General Conditions of Contract (GCC) /Specification are repugnant to or at variance with any provisions of the conditions of contract, then unless a different intention appears, the provisions of the GCC shall to extent of such repugnancy, or variations, prevail.

2. Interpretations of terms in this contract

The terms appearing in the tender notice, tender form, agreement, instructions to tenders, GCC, technical specifications, schedule of quantity's and drawings will have the following interpretations.

'Owner' shall mean shall mean on whose behalf this tender / enquiry is floated and shall also include their officers, authorized representatives, legal representatives, assignees or successors.

'Architect' shall mean authorized representative involved with the design and supervision of the whole of the said project or work as described in the tender also nominated by the Owner.

'Service Consultant' shall mean authorized representative involved with the design and supervision of Services as described in the tender also nominated by the Owner.

'Contractor' shall mean the successful tenderer who has been awarded the contract with whom the Owner is having a signed agreement on stamp paper.

3. Inspection of site before submission of tender

The tenderer must visit the site of work before submission of the tender to fully satisfy himself the existing conditions of site and performance thereon. The dimensions, clearances, contours and the levels indicated in the drawing, if any, are approximate and tentative only. He must fully acquaint himself before submission of his tender as to the facilities at the site, limitations as to the extent and position of working space, the existing facilities like access, roads, electricity, water, provision for transportation of materials and storing and stacking the same at places with in the site and for all other matters concerning the site and effecting the performance of the work. No claim shall be admitted on grounds of the site visit as mentioned above.

4. Rate

The UNIT rate shall include cost of material, import duties, other duties & taxes, GST, all Cess, tools and plants, transportation, freight, insurance, storage, incidental expenses, loading / unloading, shifting in position with required hoists and equipment, labour, night labour, wastage, contractor's profit, installation, testing, commissioning and other works required. In the case of imported items, in addition to the above, customs duties, freight, all insurance, port clearance charges, etc. are also to be included in the unit rate. The rate shall be FIRM throughout the contract period.

5. Tender validity

The tender should be kept valid for a minimum period 45 days or as indicated elsewhere in the tender particulars.

6. Payment terms

The payment terms will as provided in the Tender Particulars.

All statutory deductions shall be made from the amount eligible to the contractor from each running bill as per the prevailing rates. The deduction towards tax shall be as per GST Act, IT, workers welfare fund etc. Any tax omitted which is to be deducted in any part bill, shall be deducted in the final bill. All statutory payments in connection with the employment of the workmen for this work shall be borne by the Contractor.

7. Earnest money deposit (EMD)

All Tenderers are required to submit EMD as per the value specified along with their tender, if asked for. The EMD is required to protect the Owner's interest against the risk as mentioned below. Tenders not accompanied by the "Earnest Money Deposit" shall be summarily rejected. The validity period of the Earnest Money Deposit shall be 30 days beyond the tender validity period. The Earnest Money Deposit shall be forfeited:-

a) If a tenderer withdraws his tender during the period of tender validity.

or

b) In the case of successful tenderer, if he tenderer fails to sign the contract and / or fails to furnish Security Deposit.

EMD will be returned to all tenderers as soon as the tender is finalized and the contract is signed with one tenderer. No interest will be payable on Earnest Money Deposit.

8. 'Security Deposit' during execution of work

The successful tenderer will have to submit a security deposit as per the percentage of value specified while executing the contract agreement. The Security Deposit will be released subject to following conditions. The validity period of security deposit shall be 30 days beyond the contract period. No interest will be payable on security deposit.

- a) Satisfactory completion and commissioning of the entire work and handing over of all the required data in the required pro-forma to the Owner.
- b) After fulfilling all the contractual obligations as per tender conditions.
- c) After submission of Bank Guarantee towards Performance Security.

9. 'Performance Security' during warranty period.

The tenderer shall furnish performance security as per the percentage of value specified on commencement of warranty period. The proceeds of the performance security shall be payable to the owner as compensation for any loss resulting from the contractor's failure to complete its obligations under the contract during warranty period. The performance security will be discharged after completion of the contractor's warranty obligations. The validity period of performance security shall be 30 days beyond the warranty period. No interest will be payable on performance security.

10. Retention money

Retention Money at the rate specified will be deducted from each running bill until the cumulative total of such deductions, herein referred to as 'Retention Money', shall amount to 5% of the executed value. The retention money will be refunded on furnishing a Performance Security as specified and the owner is satisfied that there is no demand outstanding against the Contractor. No interest will be payable on retention money.

11. Admission to site

The contractor will not be allowed to enter on or take possession of the site until instructed to do so by the Owner. The contractor shall provide all necessary temporary access roads to work site as may be directed by the Owner and shall adopt and maintain the same as required and directed by the Owner during the currency of the works and shall clear away and make good thereof all at his own expenses free of cost and directed by the Owner. No photographs of the site or of the works or any part thereof shall be taken published, or otherwise circulated without the prior permission of the Owner. The Owner shall have the power to exclude from their site any person whose admission thereto may be in his opinion undesirable for any reason whatsoever.

12. Warranty and defect liability

The warranty shall be valid for twelve months after successful performance testing. Contractor shall warranty that all the equipments shall be free from any defect due to defective materials and / or bad workmanship and also the equipments shall work satisfactorily with performance and efficiencies not less than the guaranteed values. Any part found defective during this period be replaced free of cost by the contractor. The service of the contractor's personnel if required during this period shall be made available free of cost to the owner. The contractor shall depute his representative within 36 hours of notification of the defect by the owner. The representative of the owner and contractor jointly shall prepare remedial action required. Time schedule for such action shall also be finalized. In case the contractor fail to depute his representative within 36 hours of notification of defect or fails to cause remedial measure within reasonable time as decided during joint inspection, the owner may proceed to do so at the contractor's risk and expenses and without prejudice to any other right.

The contractor shall visit and inspect the work in the presence of the owner at least once in three months during the warranty period to check the health of the installation as per manufacturer's maintenance schedule. The owner or his representative shall certify this fact. In case the contractor does not comply with this provision in this regard, the owner will forfeit 10% of Security Deposit amount for each quarter. Replacement under warranty clause shall be made by the contractor free of all charges.

13. List of machinery

The contractor shall along with the tender submit a schedule of machinery and equipment he purposes to use a site in support of his assurance to adhere to the time schedule specified for the entire completion of the work.

14. Engineers and overseers

The Contractor must employ his own qualified engineers and supervisors at site to supervise the

workmanship as well as quality control of the materials. The day to day supervision required for smooth progress of the work is the deemed responsibility of the contractor. The contractor should appoint a full time supervisor at site and he will be attending all the works and co-ordinating with other contractors through Architect/Consultant.

15. Drawings

The tender drawings, which are available for study, shall serve as the scope for the work. They indicate general layout of the site only, the actual location, distance, levels, layout of items, etc. will be governed by the field conditions. If any discrepancy or violation of standards / statutory requirements are noticed by the tenderer, he has the responsibility to point out the same in writing which may be attached along with the tender.

16. Shop drawing

No supply, fabrication and installation should be put into execution until this shop drawings are approved by the Consultant. The complete set of Shop drawings should be submitted to the Consultant within 7 days of work order.

17. Approval of drawings & installation

The contractor shall have to take approval of all the drawings from the concerned authorities before starting of work at site and after completion of work. Installation the same shall be approved by the concerned authorities before the work / installation is put into use.

18. Approval by Statutory Authorities

The contractor shall co-ordinate the inspection /approval by the approving authorities of the work carried out by him for the purpose of compliance with the necessary regulations. The contractor shall also supply the necessary drawings /documents for submitting to the approving authorities.

19. Statutory obligations

It shall be the exclusive responsibility of the contractor to comply with all statutory obligations / formalities and make contributions to the concerned statutory authorities in connection with Sales tax, PF act, ESI Act and any other statute for the time being in force. The Owner shall have absolute powers to recover from the Contractor any sum paid by the former to any statutory authorities on behalf of the Contractor.

20. Materials

All materials to be used in the installation shall be of the best quality conforming to the relevant IS specifications. They must be products of reliable manufactures of many years standing. All like parts of materials shall be interchangeable. Sample of material wherever required should be approved by the Consultant before supply at site.

21. Materials supplied by the Owner

All materials supplied by the owner should be inspected and verified by the contractor prior defects prior to installation. It is the responsibility of the Contractor to inform the Consultant immediately in case any of the material are found defective. The items supplied to the Contractor should be checked and confirmed to be strictly as per the requirements. Discrepancies if any shall be immediately informed to the Consultant without delay.

22. Stores and materials

Safe custody of the materials brought at site shall be Contractor's responsibility till the installation is taken over by the Owner after successful testing & commissioning. However a space may be provided by the Owner on intimation well in advance before receipt of material at site. The contractor shall make his own arrangements for the accommodation of his staff, materials, tools etc.

23. Make and other details of materials

The contractor shall furnish a list of makes selected from the list of 'Approved makes' indicated in the tender as well as other details of various materials he proposes to use for the work and this should be subject to the approval of the Architect/Consultant. Consultant at their discretion may change (add or delete) in such list during the execution of the contract.

24. Undertaking for quality of workmanship & material

An undertaking should be carried out by the Contractor for the quality of the total work and good workmanship. The contractor should possess all the tools and testing instruments required to execute, test and commission the installation. The Contractor is liable to fully co-operate with the Consultant and the Owner during the entire period of contract.

25. Increase/ decrease of tendered quantity

Owner will have the right to increase or decrease the tender quantity depending upon the requirement of goods and services specified in the schedule of items without any change in the unit price or other terms and conditions.

26. Inspections of materials

The contractor shall make all arrangements for inspection of materials/ equipment by the owner's officers at the manufacturer's factory, if required free of cost. Necessary trained manpower and equipment for testing shall be provided.

27. Period of final measurement

The final measurement shall be done within 15 days from the date of completion of the work which has to be informed to the Owner/Consultant.

28. Work Programme

A detailed Programme for the execution of the work shall be prepared by the contractor and submitted to the Consultant within 7 days from the date of issue of work order.

29. Site Co-ordination

The contractor should co-ordinate with all the other contractors at the site so that conflicts are foreseen in advance. The work Programme at the site should be prepared in advance and planned based on the completion date mentioned. If any information / work front / drawings are not available at the time of carrying out the work, these are to be informed to the owner immediately.

30. Completion of work

As per the NIT, the time allowed for completion of entire work consistent with magnitude and urgency of work as specified. The time allowed for carrying out the work as entered in the contract is reckoned from the date on which the orders to commence the work are given to the contractor.

31. Extension of time

If the contractor shall desire an extension of time for completion of work on the grounds of his having been unavoidably hindered in its execution or on any other ground, he shall apply in writing to the Owner, and the Owner shall if in his opinion reasonable grounds to be shown therefore, authorize such extension of time, if any, as in his opinion be necessary or proper.

32. Compensation for delay

If the contractor fails to maintain the required progress or complete the work and clear the site on or before the contract or extended date of completion, he has to pay the compensation for the delay which is specified in the Tender Particulars.

33. Co-ordination with other agencies

Generally more than one agency is working at the same premises. It shall be the aim of agencies that on their account the work of the other agencies is not delayed. Full co-ordination and co-operation shall therefore be extended by the Contractor to other agencies working in the site during the execution of the work to ensure prompt and quality work.

34. Sublet

The contractor shall notify the owner in writing of all subcontracts awarded under this contract if not already specified in his tender. Such notification, in his original tender or later shall not relieve the contractor from any liability or obligation under the Contract.

35. Performance review

In order to review the performance of the work and to suggest the suitable corrective measures, review meetings will be conducted by the owner at site or wherever convenient. The contractor should attend such meetings without fail.

36. Insurance to Staff

The Contractor shall also take insurance for all his staff and workers working at the site against injury, loss of life, etc., and also for materials against damages, theft, fire, etc. No claim of compensation to staff /workers/materials will be entertained in this regard. The Contractor shall indemnify the Owner against all such claims.

37. Terminate the contracts at any time

The Owner shall be entitled to determine and terminate the contracts at any time should, in the Owner's opinion, the cessation of work become necessary owing to paucity of funds or from any other cause whatsoever in which case the value of approved materials at site and of work done by the contractor will be paid for in full at the rates specified in the contract. Notice in writing from the Owner of such determination and the reason therefore shall be conclusive evidence thereof.

Should the contract be determined and the contractor claims payment for expenditure incurred by him in the expectation of completing the whole of the works, the owner shall admit and consider such claims as deemed reasonable and are supported by vouchers to the satisfaction of the Owner. The contractor shall have no claim to any payment of compensation or otherwise, whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he might have derived from the execution if the work in full but which he did not derive in consequence of determination of contract. The Owner's decision on the necessity and propriety of such expenditure shall be final and conclusive.

Termination of contract owing to default of contractor, if the contractor should:

- a. Become Bankrupt or insolvent,
Or
- b. Being a company or individual go into liquidation,
Or
- c. Have an execution levied on his goods or property in the works.
Or
- d. Abandon the contract.
Or
- e. Persistently disregard the instructions of the Owner or contravene any provision of the contract.
Or
- f. Fail to adhere to the agreed Programme of work within the stipulated period.
Or
- g. Fail to remove materials from the site or to pull down and replace work after receiving from the Owner notice to the effect that the said materials or works have been condemned or rejected,
Or
- h. Fail to take steps to employ competent or additional staff and labour as required for supervision of these conditions as suggested by the owner.
Or
- i. Fail to afford the Owner's representative facilities for inspection the works or any part thereof as required,
Or
- j. Fails to attend review meetings arranged by the owner.

COMMERCIAL TERMS & CONDITIONS - CONFIRMATION SHEET

(To be filled in by the tenderer)

Tenderer has to provide all the deviations in the commercial terms and conditions, if any, below. Any deviation in the terms and conditions, mentioned here only will be considered for evaluation.

TECHNICAL SPECIFICATIONS

1.00 PREAMBLE

1.1 The specifications mentioned hereunder are common and equally applicable for similar items of work wherever in the schedule and the same shall be followed, unless otherwise specified. The work shall be carried out with these specifications, construction drawings and any other authorized deviations issued from time to time apart from the specifications shown here under. All the materials required for the work shall be provided by the contractor unless otherwise specified. Unless the provisions of other standards are expressly incorporated by reference into these specifications, materials and equipment, tests, shall be in accordance with the latest edition of the appropriate Standards and Codes published by the Bureau of Indian Standards, and designated by the acronymic. The method of measurements of various items in the tender shall generally be in accordance with the respective Indian Standards. The payment shall be made as per the units specified in the schedule.

2.0 RESTRICTIONS AT WORK SITE

2.1 The Contractor shall be responsible for maintaining good order on the work site and shall employ such experienced Engineer, qualified Supervisor etc. as may be required. Contractor shall have to produce the undertaking from the Engineer for ensuring his supervision throughout the period of execution of work. And his professional qualification certificate copy also has to be submitted to NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee well before the commencement of work at site. The Contractor should ensure that the works are carried out in a peaceful manner at site. The materials should be kept neatly stacked in a place that it would not affect other works at the site.

3.0 WORKMANSHIP AND DETAILED SPECIFICATIONS CLEARING OF SITE

3.1 The works to be done under this item consists of furnishing all equipment, labor and materials and grubbing operations hereinafter specified and or as directed by NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor/authorized personals. The Contractor has to do all the clearing required to carry out the work under this contract. Surfaces of all working area in or under water or liquid mud shall be cleared of trees of all sizes, jungle grass, stumps, roots, logs and other objectionable materials. Cutting and removal of trees shall be restricted to that necessary for construction/ excavation and shall be done only on specific authorization from The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction

Committee Engineer/Supervisor. In such cases the Contractor shall be responsible for the accounting and handing over of the timber to NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee. All stumps, roots, bushes, buried logs and other debris within the area required to be cleared and grubbed shall be burnt or otherwise completely removed from the site to the satisfaction of The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor.

4.00 SETTING OUT FOUNDATION TRENCHES

4.1 The Contractor shall carry out the setting out the process of laying down the excavation lines and center lines of columns etc in the ground before excavation/boring with his own staff using precise instruments and shall establish reference pillars of masonry at his cost. These pillars shall be about 20cm thick and about 15cm wider than the width of the foundation trench. The top of the pillars shall be plastered, and shall be set at the same level, preferably at the plinth level. Pegs shall be embedded in these pillars and nails shall be then driven in the pegs to represent the center line and the outer lines of the trench. The Contractor shall supply free of charge all labour, pegs, survey instruments as may be necessary for the proper checking of work. The Contractor shall be responsible for the true and the proper setting out of the work and for the correctness of the position, levels, dimensions and alignment of all parts of the work. For interior works the contractor must assign a technically competent and experienced engineer for setting out the interior layout plan at the floor and the same will have to be verified and approved by the consultant and NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee engineer.

5.00 EXCAVATION

5.1 The excavation is to be carried out in all type of soil, etc. The excavation shall be open cut excavation and shall be made to the full dimensions required and shall be finished to the prescribed lines and levels as per the approved drawings issued for the work. During the progress of work, it may be found necessary to vary the slopes or dimensions of the excavations from those shown in the drawings as directed by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor and the Contractor shall be entitled to no increase in rates on account of such changes. When the excavation is completed to the approximate grade specified by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor, all loose rock and other excavated materials shall be removed and the surface shall be cleared for the purpose of inspection. Every precaution shall be taken to prevent slips in excavated area. But should slip occur, the slipped materials shall be removed by the Contractor to the designed slope. All temporary works required for protecting the cut slope during construction shall be done by the Contractor at his own cost. The quoted rates shall be inclusive of all these works. No extra payment will be made in this regard.

5.2 Measurement and payment:-The payment for excavation will be made at the agreed rate for the relevant items in the accepted schedule.

6.00 TECHNICAL SPECIFICATIONS FOR PILE FOUNDATIONS

6.1 Unless otherwise stated, the quantity of the materials and specifications for the work shall conform to the latest I.S. specifications. If both these specifications are not applicable to any items, it shall be decided by the Architect/ Engineer in-charge, with the concurrence of the EMPLOYER as per the general Engineering practice, whose decision shall be final and binding on the contractor

6.2. The scope of work is for providing and Testing of Rotary drilling Bored Cast-in-situ RCC pile foundation/DMC Pile.

6.3. The piles will have to be founded on hard rock as per the design. Minimum anchorage in hard rock should not be less than 300mm or as per the design of structural engineer.

6.4 Removal of obstruction if any, met with during pile driving or boring shall also be done by the contractor. No extra payment will be made for this work.

6.5. The pile shall be bored, cast-in-situ.

6.6. Boring of pile shall be permitted in a group pile after 24 hours from the time of casting of last pile.

6.7. The execution of pile foundation shall conform to IS 2911 (Part 1/Section 2)1985 with latest amendments and southern railway specification of works. All the Piles shall be of the same type and shall be built to carry the heaviest load.

6.8. Vertical load testing of piles shall be carried out as per procedure laid down in IS Code of practice for design and construction of pile foundation.

6.9. The test shall be considered satisfactory if the safe load from the vertical load test with settlement not exceeding 12mm works out to be not less than one and half times safe bearing capacity of the pile.

6.10. If the pile or the pile group doesn't satisfy the above condition for accepting the same as satisfactory, the corrective measures shall be carried out as directed by the engineer in charge. The additional expenditure incurred by contractor for such corrective measures shall be borne by the contractor himself.

6.11. The base line for the building will be given by the EMPLOYER and further lining out work will be carried out jointly. Each pile point will be approved by the EMPLOYER / CONSULTANT prior to commencement of boring and also prior to commencement of concreting so that there will not be any question of piles going out of centre.

6.12. Normal tolerance for out of centre and out of plumpness as specified in I.S. Code of practice shall be allowed for.

6.13. The rates should include for boring through hard strata, boulders, masonry, old foundations etc. and in case the same are met with no additional payment will be made.

6.14. All reinforcement as per finally approved designs and drawings and as actually placed in the piles/ concreting works including reinforcement, projecting in cap, laps, pins, chairs, hooks etc. be measured and paid.

6.15. The quantities indicated in the enclosed schedule are tentative and all work as per finally approved designs and drawings and as actually carried out at site shall be measured and paid.

6.16. Utmost care should be taken not to cause any damages to the foundations as well as superstructure of the adjoining structures.

6.17. The contractor should retain at least ONE RIG with accessories at site till the Centre line of all piles are checked and verified by the CONSULTANT.

7.00 PLAIN AND REINFORCED CEMENT CONCRETE

7.1 Except where they are varied by the requirements of this specification relevant Indian Standard Specifications, I.S. 456 for plain and reinforced concrete and I.S. 432 Part I & II for mild and medium tensile steel bars and hard drawn steel wire for concrete reinforcement. I.S. 1786 and I.S. 1139 for deformed bar (Tor steel) or any other relevant I.S.S. applicable together with the latest amendments shall be held to be incorporated in these specifications. It shall be the intent of these specifications to ensure that all concrete placed at various locations of the job should be durable, strong enough to carry well the design loads, it should bear and practicably impervious to water. It should be free from such defects as shrinkage, cracking and honeycombing etc.

7.2 Composition:-Concrete shall be composed of Portland cement, water, fine and coarse aggregates. The Engineer in accordance with the requirements of strength shall make the design of each concrete mix, durability, workability etc. The Contractor is expected to use concrete mixer machine for production of concrete.

7.3 QUALITY CONTROL:-The Tenderer will have to arrange for all the quality control tests as deemed necessary. The quality control tests will cover all materials going in to the concrete and will cover aggregate both fine and coarse, cement admixtures, water etc. as well as concrete. All cube test sampling and testing will be in accordance with the applicable provisions of the latest editions of Indian Standard Specifications and as specified by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Engineer/Supervisor. All necessary assistance shall be provided by the Contractor, including the labour required for collecting the samples of various materials at various locations, testing of the samples etc., at his cost. The samples of materials will be collected at the discretion of The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor. The concrete test cubes will be required to be cast from each type of mix of concrete placed in each shift and at intervals as determined by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor to ensure the desired quality control. The Contractor shall ensure that the samples tested shall satisfy the acceptance criteria as per BIS 456-2000 and its amendments from time to time.

7.4 DESIGN MIX:-The strength of concrete mixes to be adopted in the work under this contract shall be as specified in the approved drawings. The ingredients of each mix shall be as per its approved mix design. The sampling and testing of the concrete cubes shall be done as per the relevant BIS Specification. The results shall conform to the requirements specified in the relevant BIS. The size of coarse aggregate shown against each mix

mentioned in the schedule is the maximum size of coarse aggregate and the size of aggregate for each mix may vary from 4.75 mm to the maximum size as decided by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor. No additional payment will be made to the Contractor for variations in the proportion of aggregates being used in the manufacture of concrete. The rates agreed to in the schedule for concrete items shall be valid for any proportion of ingredients.

7.5 ADMIXTURES:-The admixtures shall be used as per relevant specifications and as directed by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/ Supervisor. The admixture shall be supplied by the Contractor. The Contractor should arrange for transportation, storage, dilution and mixing of the admixtures and its use in concrete as directed by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor expense. The approximate requirements of cement for different mixes shall be as per relevant Indian Standards.

7.6 Curing :-Concrete shall be carefully protected during 1st stage of hardening from harmful effects or excessive heat, drying winds, rain or running water. It shall be covered with a layer of sacking, sand, canvas or similar absorbent materials and kept constantly wet for fourteen days from the date of placing of concrete if ordinary Portland cement is used and 21 days if Portland Pozzolona cement is used.

7.7 Strength: Concrete mixed in the proportion desired shall have required compressive strength.

7.8 Tests: Samples for testing concrete, as mixed will be taken for various classes of mix.

a) When being delivered from the mixers and (b) when being placed in the forms and tested in accordance with I.S. 456 and any other is applicable. The frequency of test shall be at such intervals as ordered by the Supervision Sub Committee and subject to that every 15 m³ of concrete placed or part thereof and for a day concrete exceeding 20 m³. A batch of 6 cubes shall be made for every sample and 3 of them tested after 7 days and the remaining 3 cubes shall be tested after 28 days. The criteria for acceptance of a concrete as conforming to the specified proportion/grade of concrete shall be in accordance with I.S, 456 and the contractor shall entirely re-do the rejected work at his own cost. Strength of 28 days shall alone be considered for acceptance. No payment will be made for the samples taken for testing.

8.00 CEMENT SOLID BLOCK

8.1 Cement solid blocks shall be of thickness 15,10,20 cm size or specified. Cement Solid blocks shall be of the best quality hard, well cured and should have required compressive strength.

9.0 RANDOM RUBBLE MASONRY

9.1 Rubble masonry shall consist of granite rubble thoroughly embedded in Cement Mortar 1:8. All rubble shall be well cleaned and wetted before being laid. Care shall be taken to break joints vertically and continuous vertical joints shall be avoided. Every stone shall be flushed in mortar and no dry work or hollow space shall be left. Masonry on no account shall be allowed to present a dry surface during the curing period for at least even days. The specification of sand for concrete shall apply to the sand used for this work also.

10.00 DOORS, WINDOWS & VENTILATORS

10.1 All doors, windows and ventilators shall be of good quality and approved colour. It shall be fixed as per the specification and drawing and also as per the direction of The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor.

10.2 ALUMINIUM FRAMED DOORS AND SHUTTERS : All sections used for the aluminium door frame and shutters shall be of powder coated aluminium section of 1.5 mm thick of Jindal/ Hindalco or equivalent. The colour of the powder coating shall be as approved by the Engineer-in-Charge. The upper panel of the door shutter shall be 4 mm thick plain glass and the lower panel shall be 4 mm thick ACP sheet fixed with necessary cleats, rubber beadings. All the hinges shall be stainless steel hinges, door closer of adequate gauge shall also be provided. Door stopper and other fittings shall also be provided. Two numbers of door handles, lock, tower bolts shall also be provided.

10.3 Toughened glass Door:- Providing fixed glass partition and manual glass doors with S/S patch fittings, frame less partitions with 12 mm thick clear toughened glass with DORMA or approved equivalent make/manufacturer (PT Standard), patch fittings such as PT-24-top pivot, PT-20-top patch, PT-10-bottom patch, US 10 corner lock with EPC, lock keeper plate, PT-40 top patch with cover panel, PT-90 central connector, PT-91 corner connector, PT-92 side connector, 'H' pull handle TGDI-H-450(450 mm x 25 mm) and floor spring DORMA or equivalent BTS75V conforming to DIN EN 1154 with adjustable spring strength EN(1-4). The above work complete in all respect as per approved drawings and to the satisfaction of the Engineer-in-Charge.

10.4 Aluminium Windows/Ventilators :- All sections used for the aluminium windows frame and shutters shall be of powder coated aluminium section of 1.5 mm thick of Jindal/Hindalco or equivalent. The colour of the powder coating shall be as approved by the Engineer-in-Charge. The panels of the windows shutter shall be 4 mm thick plain glass and fixed with necessary cleats, rubber beadings. Windows shall be provided with necessary handles, tower bolts/locks.

11.00 PLASTERING

11.1 Scaffolding for carrying out plastering work shall be durable scaffolding having two sets of vertical supports so that the scaffolding is independent of the walls.

11.2 Preparation of surfaces:-All putlog holes in brickwork and junction between concrete and brick work shall be properly filled in advance. Joints in brickwork shall be raked out about 10mm and concrete surface hacked to provide the grip to the plaster. Projecting burns of mortar formed due to gaps at joints in shuttering shall be removed. The surface shall be scrubbed clean with wire brush to remove dirt, dust etc. and surface thoroughly washed with clean water to remove efflorescence, grease and oil etc. and shall be kept wet for a minimum of six hours before application of plaster.

11.3 Cement Plaster:-Cement Mortar of specified proportion and thickness shall be prepared in small batches and applied to the wall surface/slabs. Plastering of entire or unobstructed area shall be done at one stretch, and on occasions, when due to the extent of area being too large or for some other reasons, the work is to be left over for completion on the next day, the joint between the two days work shall be rubbed down with carbourandumstone or the work carried out in such a manner as to have no marks left in the finished work. To ensure proper thickness of plastering, gauged patches shall be made at 1.5m to 2 m apart and the surface plastered true to the line, level and plumb taking special care to finish jambs of windows, doors, wall returns, covers, junctions, etc. The cement plaster shall be cured for seven days.

11.4 POINTING WITH CEMENT MORTAR :- All joints in masonry that are permanently exposed shall be broken out at least 20mm deep during construction of masonry, when the mortar is not set. The joints are to be brushed clean of dust with a wire brush. The surface of masonry shall then be washed with water and thoroughly wetted for six hours before pointing is commenced. The mortar shall normally consist of one part of cement three parts of sand by volume unless otherwise specified. The raked joints shall be filled with mortar, well pressed into the face of the masonry and rubbed smooth. When finished the mortar pointing, shall be restricted to the width of joints and all superfluous mortar shall be removed

with a trowel. The work shall be executed as rapidly as possible(not again torched after it has begun to set) and kept moist for three weeks thereafter.

11.5 FLOORING

11.5.1 Cement Concrete flooring. The cement concrete shall be of proportion 1:4:8 and 75mm thick using 40mm broken stone. The Cement Concrete shall be laid on the prepared surface as per standard specification. The surface shall be provided with the slope if required. The concrete shall be allowed to set for about 7 days. The surface of concrete shall be finished with cement mortar 1:3, 12mm thick. The payment for cement concrete flooring shall be made for the finished area at agreed rate in the accepted schedule. The agreed rate in accepted schedule for this item shall include cost and conveyance of all materials, all lead and lift, mixing and laying concrete and cement mortar, cement grout, labour curing and all other incidentals required for this work.

11.5.2 Full body Vitrified tiles finishing (Johnson/ Nitco/ Somany/ Kajaria) [size not less than 120 X 60 cm): The Full Body Vitrified tiles finishing for the work shall be of first-class quality and of approved color and pattern with spaces provided in between. The tiles are to be set over a bed of cement mortar 1:4, 20 mm thick. No extra payment will be made for the mortar. Samples of tiles should be got approved before tiling is started. The pattern of arrangement of tiles should also be put up for approval. The tiles should be set with perfectly close and neat joints, which should be pointed with epoxy.

12.00 PAINTING WORKS

12.1 WATER PROOF CEMENT PAINT. Waterproof protection has to be carried out for all the toilets and open terraces. The paint shall be of approved colour and quality. The paint shall be prepared strictly as per manufacturers' specifications and in such quantities as can be used in an hour of its mixing as otherwise the mixture will set and thicken, affecting flow and finish. The quality, brand and the colour of the paint to be used shall be approved by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor. The surface for applying cement paint shall be thoroughly brushed free from mortar droppings and foreign matter. All broken edges, cracks, loose plaster and wavy surface shall be brought up to either by patch plasterwork. The paint thus prepared shall be applied on clean and wetted surfaces with brush or spraying machine. The solution shall be kept stirred during the period of application. It shall be applied on the surface, which is on the shady side of the building, so that the direct heat of the sun on the surface is avoided. The completed surface shall be cured. Number of coats shall be as specified on the item of Schedule.

12.2 Painting Metal Works. The Contractor shall clean the surfaces and apply paint and protective coatings as hereinafter provided and shall furnish all materials required for this work. Surfaces, which are not required to be painted or coated, but are adjacent to surfaces to be cleaned and painted shall be protected against contamination and damage during the cleaning and painting operations. Before proceeding with the painting or coating operations, the Contractor shall clean and repair all shop applied paint,

which is defective or damaged. Materials, which are to be painted shall be handled with care and protected as necessary to preserve the coating in good condition. Temporary or permanent welding will not be permitted on areas where the welding will damage paint or other protective coatings unless the areas of coating, which would be damaged thereby, are accessible for repairing and inspection. Unless otherwise specified, the Contractor shall not disassemble machinery, equipment or other metal work for the purpose of painting the interiors. Weld spatter, burrs or other objectionable surface irregularities shall be removed or repaired before cleaning. Any grit or dust remaining from the cleaning operation shall be removed before the surfaces are painted. In the event that rust forms or the surfaces become otherwise contaminated in the interval between cleaning and painting, or between coats of paint, re-cleaning shall be done at Contractor's cost. The quality and the colour of the paint to be used shall be approved by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor.

12.3 Synthetic Enamel Paint. The paint shall be of approved brand, colour and quality. The paint shall be prepared strictly as per manufacturers specification and shall conform to the latest IS specification. The surface of woodwork shall be prepared to receive the paint. The surface of woodwork shall be thoroughly cleaned and the heads of nails shall be punched to a depth of 3mm below the surface. The surface of the woodwork shall be then knotted. The priming coat shall be applied on the surface of new woodwork. Then the holes, cracks etc on the surface shall be filled with ordinary putty made from whiting and linseed oil. The surface shall be rubbed by means of pumice stone or glass paper or both. The subsequent coats of paint shall be applied on the surface. Extreme care should be taken to see that the finishing coat presents smooth and even surface and that no brush marks are seen on the finished work.

13.0 WATER SUPPLY AND SANITARY ARRANGEMENT

13.1 The water supply and sanitary arrangements shall be made as specified in the drawings. All PVC/CPVC pipes used for water supply, sanitary arrangement and drainage, PVC/CPVC bends and fittings shall comply with the relevant BIS specifications and shall be free from cracks and damages. PVC/CPVC down water pipes and PVC/CPVC bends shall be provided at places pointed out by the Supervision Sub Committee. The rate quoted shall include the cost of PVC pipe / CPVC pipe, bends, clamps, other specials and screws, labour charges for fixing the pipe to wall with clamps and screws, plugs, cutting masonry/ concrete, scaffolding and all other incidental charges. The work shall be carried out through licensed plumbers only. The rates quoted shall be for completed items of works and shall cover all costs of labour, tools, equipment and chargeable expenses.

13.2 All incidental charges in direct costs and supervision charges pressure and testing charges shall be included in the quoted rate. The rate shall include cost of repairing damaged areas during working and also cost of all clearing operations. The rate quoted shall be valid for works in all the floors and the external work including excavation of

trenches and refilling trenches as per the direction of The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/ Supervisor. In the interior of the building all pipes P.V.C./CPVC pipes and pipe fittings, taps etc. which are to be embedded in the concrete or masonry work or other building work shall be placed in position to lines and levels and embedded as directed at the time of casting of concrete or erecting brick work.

13.3 In case where chiseling or cutting of concrete, masonry or other structural or construction work is unavoidable, the locations of such fittings, pipe lines and taps etc, shall be marked suitably and the cutting, chiseling of the construction work shall proceed only after due approval of The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Engineer/ Supervisor. All cutting, chiseling and fixing and pressure testing work shall be completed before commencement of tiling or finishing work. On award of contract, the Contractor shall make a detailed design and layout of the water supply and sewage system for the approval of The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor. The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor shall on receipt of design and layout comments for necessary changes to be incorporated will be furnished by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor. The Contractor shall make all such changes directed by them and submit the final plans for approval. The work shall proceed only after the approval of final plans. The work in every respect during progress till final acceptance by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCES construction Committee Engineer/Supervisor including raw materials delivered at site to be incorporated in construction of the work by the Contractor shall be under his charge and under the responsibility of the Contractor. Any loss or damage to such materials or work prior to final acceptance of the work by the Board shall be replaced and rectified by the Contractor at his expense.

13.4 Testing. All PVC pipe and fittings shall be tested at standard pressure as per relevant IS specifications and as directed by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor. Leaky joints shall be made leak proof by tightening or redoing the work at contractor's cost.

14.0 Sanitary Fixtures (Jaguar brand Ornamix/ Vignette or equivalent) European Type Water Closet

14.1 It shall be of light colour white vitreous China from an approved manufacturer conforming IS specification and shall have 'P' or 'S trap' of the same material. Each closet shall be provided with following accessories:-

- a) Duroplast seat of approved quality and seat cover with rubber buffers fixed to the pan with C.P. brass bar hinges.
- b) A low-level flushing cistern of 15 liters capacity of automatic flushing tank of best quality manufactured by an approved firm with C.P. Flush handle and 15mm

diameter PV Coverflow pipe of required length with mosquito proof bronze cap, supporting brackets etc complete unit, including enameled or C.P. Flush pipe and bend.

d) Required diameter P.V.C. heavy quality water inlet pipe of required length with C.P. brass mains and 15mm G.M. Wheel valve. All M.S. and C.I. fittings and fixtures shall be painted with two coats of enamel paint of approved quality over a coat of primer.

e)

14.2 Wash Hand Basins (Jaguar brand Ornamix/ vignette or equivalent). They shall be of white vitreous China flat back size 580x400 mm (22"x16") with single 15 mm CP Brass pillar tap from an approved manufacturer conforming to IS specification. It shall be provided as per drawing or direction of the Engineer-in-charge and shall be of size specified in the schedule. Each basin shall be provided 15 mm C.P. brass pillar taps of approved design and make, C.P. brass waste 32mm, C.P. brass chain and rubber plug, C.P. Brass trap of approved quality and design 32mm lead waste pipe, 15mm G.M. wheel valve, 15mm heavy quality PVC connection with CP brass unions, etc. Complete wherever specified or as directed by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor. They shall be suitably recessed at the back for receiving supply and waste fittings. They shall be so constructed as to support the basin rigidly and all brackets, pipes etc. shall be painted with two coats of enamel paint of approved quality over a coat prime

14.3 Testing. All waste and vent pipes and fittings shall be subjected to standard pressure/water and smoke tests as per relevant I.S.S. and as directed by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor. If any leakage is noted, the work shall be stopped and made good by the Contractor at his cost.

15.00 WATER SUPPLY

15.1 Water pipes shall be of P.V.C of specified nominal bore of heavy quality, manufactured by an approved firm. The pipes shall be tested and shall be fixed in longest possible length with all necessary bends, tees, couplings, reducing tees etc. in perfect straight lines, both vertical and horizontal by means of standard holder but clamps keeping the pipes 12mm clear of the wall everywhere or concealed as directed. Pipes embedded in Concrete/ masonry shall be painted with two coats of hot asphalt. For external work, P.V.C pipes and fittings shall be fixed with required spacing for working. The pipes laid underground shall be at a depth not less than 60cm below the ground level. The work of excavation and refilling trenches shall be done as directed by The NSMEMORIAL

INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor. All exposed pipes and fittings shall be painted with two coats of approved shade of enamel paint over a coat of approved primer.

15.2 Testing:-All P.V.C. pipes and fittings shall be tested as per standard pressure as per relevant I.S.S. and as directed by The NS MEMORIAL INSTITUTE OF MEDICAL SCIENCE Construction Committee Engineer/Supervisor. Leaky joints shall be made leak proof by tightening or re-doing the work at Contractor's cost.

16.00 Hollow Steel Section For Structural Use.

16.1 All the structural members shall be conforming to IS-4923-1997. Manufacturer name/logo/Trade mark shall be embossed on each hollow section. Each hollow section shall have the size designation suitably marked on it. All the structural members shall be painted with one coat of epoxy primer before cutting and welding. All the weld joints shall be continuous weld, free from flaws and cracks. All the machineries and equipment required for hoisting the structural members shall be provided by the contractor at site.

LIST OF MATERIALS OF APPROVED BRAND FOR CONSTRUCTION

Ceramic Floor Tiles	Johnson, Nitco , Somany ,Kajaria
Patch fittings / Door locks & Door closers	Godrej, Ozone, Merit
Plastic emulsion	Berger, Nerolac, Asian
PVC pipes (6kg/cm ²)	Hycount, Astral, ISI make
PVC pipes (10kg/cm ²)	Hycount, Astral, ISI make
Cement	Malabar/Sankar/ Ultratech/Ambuja/ACC, RAMCO
Hardware (locks)	Godrej, Ozone, Merit
Glass (all types)	Saint Gobain, Modiguard, Hindustan, Asahi, Triveni
Cement paint	Berger, Nerolac
Exterior Paint	Nerolac/ Berger/ Asian
Structural steel	Tata/ Vishak equivalent ISI make
Sanitary fittings	Jaguar or equivalent ISI make
Sanitary ware	Jaguar or equivalent ISI make
Light fittings	Luker, Havells, Crompton
Exhaust Fans	Bajaj, Havells, Crompton
Water proofing materials/Tile adhesive	Fosroc, STP, BAL, IWL, ROFF
Electrical	Legrand, ABB, Havells

LIST OF MATERIALS OF APPROVED BRAND FOR CONSTRUCTION (ELECTRICAL)

Wire	RR /Polycab /Equivalent
Switches/Socket/switch plates	Legrand/ L & T/Equivalent
Distribution Board	Legrand/ L & T/Equivalent
MCCB/RCBO	Legrand/ L & T/ Schnieder/ Equivalent
Conduit	Suprem/ balco/ Equivalent
Cables	Gloster/ Finolex/ Polycab

SIGNATURE OF CONTRACTOR

FORMAT FOR 'AGREEMENT'

(ON NON-JUDICIAL STAMP PAPER OF Rs. 100.00)

THIS AGREEMENT made in day of 2019... between (*Name and address of Owner*) (hereinafter called "the Owner") of the one part and (*Name and address of Contractor*) (hereinafter called "the Contractor") of the other part:

WHEREAS the Owner invited tenders for the execution of work viz., (*Brief description of work*) and had accepted a tender submitted by the Contractor for the work in the sum of (*Contract price in words and figures*) (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this agreement, viz.:
 - a) Tender Document No..... dt.....submitted by the Contractor.
 - b) Schedule of quantities with accepted rates.
 - c) Terms and conditions
 - d) Makes of items.
 - e) the Owner's Work Order.
3. Whereas the Contractor has agreed with the Owner for the performance of the work in conformity with the Tender Conditions, Schedule of quantities and Rates and Drawings
4. In consideration of the payments to be made by the Owner to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Owner to complete the work and to remedy defects therein in conformity in all respects with the provisions of the Contract.
5. The Owner hereby covenants to pay the Contractor in consideration of the execution of the works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

Total contract price : Rs.

Time of completion :

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

Signed, Sealed and Delivered by the
said (for the **Owner**)

in the presence of:

Signed, Sealed and Delivered by the
said (for the **Contractor**)

in the presence of

NS MEMORIAL INSTITUTE OF MEDICAL SCIENCES
(A unit of kollam Dist. Co-operative Hospital Society Ltd., No Q-952)

NAME OF WORK : CONSTRUCTION OF RESTORENT BUILDING AT MEDILAND, NS CO-OPERATIVE HOSPITAL, KOLLAM

BILLS OF QUANTITY : A CIVILWORKS

Quotation inviting Authority:- The Secretary, Kollam District Co-operative Hospital Society Ltd Q952

Ser No	Description of item of work	Accounting Unit	Quantity	Unit Rate	Amount
1	Surface dressing the entire work site and clearing all bushes/grass/debris from the site and disposing the same to a distance not exceeding 1.5 Km from the site and disposing the same where directed by the Engineer-in-Charge.	100 M ²	2500.00		
2	Earth work excavation manually /mechanically in below ground level for all kind of works in any type of soil for a depth up to 3.00 m including removal of vegetation, shrubs and debris, cutting and dressing of sides in slopes, leveling, grading and ramming of bottoms, dewatering of accumulated water from any source and keeping the surface dry for subsequent works and disposal or stacking of excavated material within a lead of 100m including providing temporary supports.	M ³	59.90		
3	Back Filling with available cut earth in layers not exceeding 20cm in depth consolidating each deposited layers by mechanical compaction and watering including re excavating the deposited soil excavated earlier ,breaking loads ,laying at all depths and heights in layers of thickness not exceeding 20cms watering rolling and ramming by manual methods/mechanical compactors to achieve 90% laboratory maximum dry density, dressing ,trimming etc .in foundations, plinths ,trenches ,pits etc all complete.	M ³	39.83		

4	Conveying and disposal of excavated Earth and debris including surplus earth and vegetations from construction area lead upto 100mtr from the Site including re-excavating the deposited soil excavated earlier ,transportation, loading ,unloading, laying at all depths and heights. Stacking .leveling and dressing both the area .(Disposing area shall be shown to the contractor by the hospital)to required levels and slopes complete with all lifts as directed by the Engineer-in-charge(Volume of Truck measured abd reduced by 30% for voids)	M ³	20.07		
5	Providing and laying PCC 1:4:8 using 40mm and down grade hard granite broken stone and M-sand 1st quality machine mixed for foundation/flooring bed including , compacting, curing, cost, conveyance of all materials and all labour charges	M ³	35.58		
6	Material and labour for Chips piling by using hydraulic machine for digging 10 cm dia 100 cm deep chips piles, filling the holes with 6 mm chips complete all as specified and as directed by Engineer-in-Charge.	Each	216		
7	Providing and laying R.C.C. M25 or specified grade for column footing including columns and plinth beams as per structural design using 20 mm and down grade hard granite broken stone and M-sand 1st quality machine mixed and mechanically vibrated including all form work, watering, curing, deshuttering form work, cost, conveyance of all materials and all labour charges etc. complete	M ³	20.08		
8	Providing and laying R.C.C. M25 or specified grade for Beams as per structural design using 20 mm and down grade hard granite broken stone and M-sand 1st quality machine mixed and mechanically vibrated including all form work, watering, curing, deshuttering form work,cost, conveyance of all materials and all labour charges etc. complete for the following items. But excluding cost of Cement & Steel reinforcement.	M ³	5.16		

9	Providing and laying R.C.C. M25 or specified grade for Slab as per structural design using 20 mm and down grade hard granite broken stone and M-sand 1st quality machine mixed and mechanically vibrated including all form work, watering, curing, deshuttering form work, cost, conveyance of all materials and all labour charges etc. complete for the following items. But excluding cost of Cement & Steel reinforcement.	M ³	0.4		
10	Providing and laying R.C.C. M25 or specified grade for Lintel, lintel bands as per structural design using 20 mm and down grade hard granite broken stone and M-sand 1st quality machine mixed and mechanically vibrated including all form work, watering, curing, deshuttering form work, cost, conveyance of all materials and all labour charges etc. complete for the following items.	M ³	1.72		
11	Reinforcement work with Fe 500 or specified compressive strength TMT steels for R.C.C works bent, tied and placed in position including cleaning the existing dowel rods, overlapping or welding wherever necessary as per the direction of engineer in charge including cost of 18gauge GI binding wire and conveyance of all materials and all labour charges etc complete	Kg	1609.24		
12	Providing and constructing PCC Block masonry wall in cement mortar 1:6 (1 cement: 6 M-sand) 20 cm thick Including necessary scaffolding, curing, racking of joints etc cost, conveyance of all materials and all labour charges complete for superstructure.	M ³	50.43		
13	Plastering inside face of wall CM 1:5 12mm thick one coat floated hard and trowelled and finished smooth including scaffolding, curing etc using chicken mesh wherever necessary at joints between masonry, column and beams/lintels including cost conveyance of all materials and all labour charges etc.. complete Excluding cost of cement as directed by the Engineer in charge. (With Plastering M-sand)	M ²	243.51		

14	Plastering with cement mortar 1:5, 12mm thick to external walls , parapet & drop slab at all heights, floated hard and trowelled to get a smooth finish, including drip coarse, grooves, scaffolding at any height, curing etc. complete as directed by the Engineer in charge. (With Plastering M-sand)	M ²	243.51		
15	Providing and applying one coat primer, two coats cement based putty and two coat of emulsion of approved make and shade for walls and ceilings (Internal & External) including preparing plastered surface by rubbing smooth with pumice stone or fine sand paper (Size 80 to 120), filling the patch holes and levelling the depressions with level coarse putty to get an even surface. The rates including scaffolding, covering the finished floors by using plastic sheet, cleaning, washing of floors, all material and labour charges etc..all complete.	M ²	458.42		
16	Providing and applying one coat epoxy metal primer and two coats of enamel paint of approved shade for Steel work area , including preparing surface by rubbing smooth with sand paper (Size 80 to 120), filling the patch holes and leveling the depression with NC metal putty. The rates including scaffolding, covering the finished floors by using plastic sheet, cleaning, washing of floors, all material and labour charges etc..all complete.	M ²	64.23		
17	Supplying and fixing aluminium work for windows and ventilators with extruded built up standard tubular sections/ appropriate sections of 1.5 mm thick with approved make conforming to IS 733 or IS 1285 (make : Jindal or equivalent) fixing with dash fasteners including necessary filling of the gaps at junctions with EPDM rubber/ neoprene gasket, etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, aluminium snap beading for glazing/ panelling, C.P. brass/stainless steel screws, all complete as per architectural drawings. (Powder coated aluminium - minimum thickness of powder coating 50 micron)	M ²	18.75		

18	Laying Vitrified tiles of approved size laid on 40mm thick cement mortar 1:4 (1 cement, 4 coarse sand) for Flooring by providing horizontal and vertical Spacer (2mm/3mm/ 4mm/5mm) as per the drawings. (Rate including grouting the joints with tile grout of approved make, Leading, Lifting, Shifting, Stacking etc...including the cost of Tile, M.Sand & Spacer (Tile range upto Rs. 60/Sqft).	M ²	195		
19	Laying Vitrified tile of approved size fixed with Gum (approved make) on walls by providing horizontal/vertical Spacer (2mm/3mm/ 4mm/ 5mm) as per the drawings. (Rate including necessary cutting for fixing of Switch boards, etc. and grouting the joints with tile grout of approved make, Leading, Lifting, Shifting, Stacking etc... including the cost of Tile, Gum & Spacer (Tile range upto Rs. 60/Sqft).	M ²	55.44		
20	Laying Vitrified non-skid tiles of approved size laid on 40mm thick cement mortar 1:4 (1 cement, 4 coarse sand) for Flooring by providing horizontal and vertical Spacer (2mm/3mm/ 4mm/5mm) as per the drawings. (Rate including grouting the joints with tile grout of approved make, Leading, Lifting, Shifting, Stacking etc...including the cost of Tile, M.Sand & Spacer (Tile range upto Rs. 60/Sqft).	M ²	42		
21	Providing & fixing skirting up to 100 mm height to areas with Vitrified tiles or equivalent approved size & sample set in CM 1:4((1 cement: 4sieved & approved sand)12 to 15mm thick with a thin coat of cement slurry on the plastered surfaces and finishing the joints with matching coloured cement etc.. complete including cost of all materials & labour (Tile range upto Rs. 60/Sqft).	M ²	5.6		
22	Tile joint filling (3mm thick) with approved color epoxy grout including all cost of labour and materials.etc.. Complete	RM	560		
23	FRP Door + Frame (30 mm thickness) up to 75*210cm (45*90) Frame Size. Front side Wood shade with mat finish & Backside matching colour with glossy finish. Including spider babylatch Lock & Fitting materials and expert installation.	Each	6		

24	Providing and fixing of PVC false ceiling work by using 50 mm GI intermediate 60 mm ceiling section 25 mm perimeter, 20 mm L angle, 7 mm PVC panel, rawl plug, cleat and hardware etc includes all cost of materials, labours charges, conveyance etc complete.	M ²	200		
25	Alstrong make aluminium composit panel (ACP) approved colour of clear thickness 4mm fixed on pre fabricated frame work. Using 50 x 25mm (INDAL 8351) Aluminium extruded section joined horizontally and vertically using standard cleat angle and fasteners. The gap between the two panels shall be sealed with silicon sealant of make Dow corning 995 and 789 exterior grade etc.	M ²	22.5		
26	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & double acting hydraulic floor spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge .	M ²	6.3		
27	Providing approved quality non corrosive powder coated 1.5 mm thick aluminium door of varying dimensions using sections appropriate sections of bottom, top, vertical and divider, with plane glass / prelaminated partition board etc..including fittings such as glazing clip, handle etc., Complete, but excluding cost of Door closure as per the instructions	M ²	4.2		
28	Supplying and fixing 0.35mm galvalume colour coated trafford sheet for roofing. Cost including all materials, labour, transportation and loading unloading etc complete	M ²	284.3		
29	Supply, Fabrication and erection of 6" Aqua Star Square pathy with drops and fittings complete as directed.	RM	30		
30	Supplying and fixing colour coated Ridge sheet for roofing. Cost including all materials, labour, transportation and loading unloading etc complete	RM	15		

31	Back Filling (for filling under floor) with quality red soil brought from outside free of tree roots, debris, organic matters etc. in layers not exceeding 20cm in depth consolidating each deposited layers by mechanical compaction and watering rolling including all lead & lift inside the plinth, Measurements will be taken only for the filled and compacted earth.	M ³	107.73		
32	Providing, fabricating, welding and installing galvanized hollow sections 1.6 mm thick as in roof trusses, purlins and rafters complete as per the design & directions of Engineer-in-Charge.	Kg	2120		
33	Supply and fix PVC septic tank 25 flushes with necessary connection, including excavation laying the tank, refilling the earth complete all as specified and as directed by Engineer-in-Charge.	Each	2		
33	Supplying and fixing at site in 12 mm Toughened glass fixed at site using 63 x 38 aluminium section 25 x 25 x 1 mm GI square tube for glass fixing ,the glass shall be fixed with line and level, joint and wall side gap filling with clear silicon sealants (boss) and necessary items complete all as specified and as directed by Engineer-in-Charge.	M ²	35.85		
34	Supply, cut to required shape and fix by welding in position weld mesh of apearture 25 mm, 2 mm dia wire mesh complete all as specified and as directed by Engineer-in-Charge.	M ²	25		
	Total				
(Rupees _____)					

Signature of Contractor

NS MEMORIAL INSTITUTE OF MEDICAL SCIENCES
(A unit of kollam Dist. Co-operative Hospital Society Ltd., No Q-952)

NAME OF WORK : CONSTRUCTION OF RESTORENT BUILDING AT MEDILAND, PALATHARA, KOLLAM

BILLS OF QUANTITY : B- PUBLIC HEALTH ENGINEERING

Quotation inviting Authority:- The Secretary, Kollam District Co-operative Hospital Society Ltd Q952

Ser No	Description of item of work	Accounting Unit	Quantity	Unit Rate	Amount
1	Supply and Fixing at site in position colour or white glazed vitreous (European style) Water Closet with C.P. bolts, nuts, solid white plastic seat and lid, angle cock, CP tube, PVC brass hinges including 10 ltr PVC flush systems and rubber buffers with all necessary fittings complete including cutting and making good the walls and floors wherever required for the following units with accessories like Teflon tape, shellac, cotton waste and silicone sealant.	Each	4		
2	Supply and Fixing at site in position white / colour vitreous china wash basin Flat back with C.I./MS brackets painted white, C.P brass waste coupling of standard pattern, angle cock, basin mixer/pillar cock , CP tube good the walls wherever required complete, with accessories like teflon tape, shellac, cotton waste and silicone sealant.	Each	12		
3	Supply and Fixing at site in position towel rail of approved make /quality. C.P brass towel rail with concealed screws.	EACH	6		
4	Supply and Fixing at site in position C.P. ablution spray health faucet with eye hook, one metre long flexible tube, angle cock with wall flange all complete including cutting and making good the walls wherever required with accessories like Teflon tape, shellac, waste and silicone sealant.	each	4		

5	Supply and Fixing at site in position soap tray by means of screws and rawl plug embedded in the walls complete including cutting and making good the walls wherever required.	each	6		
6	Supply and Fixing at site in position 15mm dia C.P Long Body brass bib cocks with wall flange including cutting and making good the walls wherever required with accessories like teflon tape ,shellac, cotton waste and silicone sealant.	each	4		
7	Supply and Fixing stainless steel sink with drain board supported by heavy duty S.S brackets, CP waste coupling , CP angle valve, CP mixer complete including and making good the walls wherever required with accessories like teflon tape, shellac, waste and silicone sealant.	each	2		
8	Supply and Fixing sink cock for sink by making good the walls wherever required with accessories like teflon tape, shellac, waste and silicone sealant.	each	3		
9	Fixing at site in position 15 mm dia angle valve with CP wall flange etc complete (For Geysers, Dish Washer, Washing Machine & Water Purifier)	each	12		
10	Supplying, Installing, Testing & Commissioning at site in position uPVC multi inlet trap (ht 4") including cutting and making good the walls and floors as required at site. 75mm dia outlet (Plain floor Trap)	each	5		
11	Supplying, Installing & Testing at site in position Polypropylene P Trap (sound level 13 dB @ 4L/sec) of size 110 mm dia of approved make for Drainage, complete with all necessary fittings of approved make, as per drawings to the satisfaction of the engineer-in-charge	each	4		
12	Supplying, Installing & Testing at site in position uPVC unthreaded pipes (As per ASTM D - 1785 , Sch.40) of approved make for water supply, complete with all necessary Sch-40 Fittings (elbows, unions, tees, reducers, couplings, nipples etc.) complete with clamping in position with G.I. "U" bolts (8 mm thick) on G.I. slotted rails (1.6 mm thick) , Rail legs (2.5 mm thick) or with split clamps of approved make including cutting chases and making good after laying the concealed portion of pipes as per drawings to the satisfaction of the Engineer-in-Charge.				

	(a) 20 mm	Metre	15		
	(b) 25 mm	Metre	5		
	(c) 40 mm	Metre	25		
	(d) 50 mm	Metre	50		
13	Supplying, Installing & Testing at site in position full way lever operated Forged Brass Ball valve of brass body with forged brass hard chrome plate (PN 25) of approved make with necessary Male Adapter (Brass Threads) fittings in position all as directed by the Engr-in-Charge.				
	(a) 40 mm dia	each	1		
	(b) 50 mm dia	each	1		
14	Supplying, Installing & Testing at site in position Brass Float valve (PN 14) of approved make with PP float & nipple with brass threaded insert, brass back nuts, piston and bolts etc complete in all respect to the satisfaction of Project Manager a 50 mm dia	EACH	1		
15	Supplying, Installing & Testing of pipes and conveying to position; and jointing to true lines and gradients, PVC pipe of IS 4985(6kg/cm2), jointing the pipe line as per specification, testing the pipe line after installation to the specified hydrostatic test pressure including Supplying, Supplying, Installing specials like bends, couplers, sockets, connections etc. as per provisions of IS: 1742-1983 (Code of practice for building drainage) complete.				
	(a) 110mm OD	Metre	30		
	(b) 75mm OD	Metre	20		
	(c) 50 mm OD	Metre	10		

16	Supplying, Installing & Testing at site in position best quality PVC gully trap of size 160 X110mm outlet embedded in plain cement concrete 1:4:8 (20mm metal), all the above encased in a chamber of 300 X 300mm built with 115mm thick brick masonry using first class country bricks in CM 1:3 over a bed of CC 1:4:8 using 40mm size metal 100mm thick ,plastering with CM1:3,13mm thick inside, outside, exposed top surfaces and internal and top exposed surface finished smooth with a floating coat of neat cement, providing and fixing FRP manhole cover and frame (10 MT) with closed bottom (not thru & thru) lifting key holes & load tested as per IS:1726 & BS EN:124 of size 300 X 300mm (12" x 12") weighing not less than 10 MT fixing the frame in PCC 1:2:4 using 20mm stone metal including painting the frame and cover with 2 coats of anticorrosive black bitumastic painting etc. complete all as specified and directed.	each	4		
17	Supply, fix in position, connecting PVC water storage tank, tripple layered, including PVC cover lid of capacity 1000 ltrs complete all as specified and as directed by Engineer in Charge.	Each	2		
18	Supply and fix PVC septic tank 25 flushes with necessary connection, including excavation laying the tank, refilling the earth complete all as specified and as directed by Engineer-in-Charge.	Each	2		
	Total				

Signature of Contractor

BOQ FOR ELECTRICAL WORKS IN NS RESTAURANT

Sl. No.	Description	Unit	Qty	Rate		Total Amount	
				Supply	Labour	Supply	Labour
1	Supply & fixing of MCB DBs/Enclosure Boxes suitable for mounting on wall fabricated out of 16 gauge CRCA sheet powder coated with approved colour, with lockable front door, complete and having following components and copper busbars, cable entry cum gland box as required.TPN switches shall be supplied with equally rated neutral links.						
a)	Three Phase meter board including accessories	each	1				
b)	Onload Changeover Switch,4P,63A	each	1				
c)	4 Way Horizontal 63A VTPN DB	each	1				
d)	4 way Horizontal TPN DB (40A/32A)	each	2				
2	Supplying and fixing MCCBs, RCCBs, MCBs, Isolators etc. suitable for inductive load of following poles in the existing MCCB/MCB DBs complete with connections, testing and commissioning etc. rating 240/415 volts as required.						
a)	40A, 100mA TPN RCBO	each	1				
b)	32A, 30mA TPN RCBO	each	1				
c)	63A 4P Isolator	each	1				
d)	6-16A SP MCB	each	12				
e)	16A- 32A SP MCB	each	8				
f)	40A 3P MCB	each	1				
g)	16A 3P MCB	each	1				
h)	MCB Blank Plates	each	5				

Cables							
3	Supply, Conveyance & Installation of the following size 1.1kV grade XLPE insulated PVC sheathed, Copper conductor power cable confirming to IS ammended upto date in cable tray or on concrete wall.						
a)	4C x 16 Sq.mm.	Mtrs.	5				
4	Supply, Conveyance & Installation of the following size 1.1kV grade XLPE insulated PVC sheathed, armoured Aluminium conductor power cable (A2XFY) confirming to IS amended upto date in cable tray or on concrete wall.						
a)	4C x 16 Sq.mm.	Mtrs.	15				
b)	4C x 6 Sq.mm.	Mtrs.	10				
End Terminations							
5	Supply and Conveyance of end termination kit with brass double compression gland, earth clip and aluminum lugs for following size of PVC insulated and PVC sheathed/ XLPE aluminum conductor cable of 1.1kV Grade as required.						
a)	4C x 16 Sq.mm.	Each	2				
b)	4C x 6 Sq.mm.	Each	2				
Earthing							
6	Supply, Conveyance & Installation of Earthing with G.I. earth pipe of 2.5 metre long and 1.5inch dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. including earthling compond as required.	Set	3				
7	Supply, Conveyance & fixing copper wire on surface/recess for loop earthing along with existing surface/ recessed conduit as required.						
a)	10 SWG copper wire	Mtrs.	75				

	Wiring						
8	Wiring for Light point/Fan point/Exhaust fan point/Call bell point using 1.0 Sqmm (including earth) FR PVC insulated copper conductor standard cable, concealed, supply and fixing ISI marked PVC medium grade conduit (rigid / flexible) complete with Modular type Switch with non metallic inner and outer cover, suitable GI metal boxes, saddles, junction boxes, bends, other accessories, ceiling roses, etc. complete upto 6 mtrs.						
a)	Single Point wiring	Set	21				
b)	Two Light Controlled by One Switch	Set	26				
9	Wiring using FR PVC Insulated copper conductor, stranded cable, concealed /open, supply and fixing ISI marked PVC medium grade conduit (rigid /flexible) as required.						
a)	2x2.5+1x1.5 Sq.mm.	Mtrs.	120				
b)	2x1.5+1x1.0 Sq.mm.	Mtrs.	115				
	Switches & Sockets						
10	Supplying and fixing following modular switch/socket on the existing modular plate & switch box including connections but excluding modular plate, GI box etc. as required.						
a)	5/6 amps switch	each	51				
b)	5/6 amp socket outlet.	each	5				
c)	15/16 amps switch	each	15				
d)	15/16 amp socket outlet.	each	13				
e)	Single module Dummy Plate	each	5				
f)	Fan regulator	each	19				

11	Supplying and fixing following size / modules, GI box along with modular base & cover plate for modular switches in recess etc as required.							
a)	3 Module	each	13					
b)	6 Module	each	3					
c)	12 Module	each	8					
e)	2 Module	each	2					
	Miscellaneous							
12	Supply and Fixing of following sizes of medium gauge PVC Conduit along with accessories in surface using appropriate clamps.							
a)	20mm PVC Conduit	Mtrs.	280					
13	Design & Preparation of drawings, documents, liaison work, etc. for getting initial/final NOC from EB/Electrical Inspectorate and other statutory agencies. (Contractor shall pay all the statutory fees initially. However, the same will be reimbursed on submission of supporting documents).							
TOTAL								

Signature of Contractor