

SPECIAL CONDITIONS OF CONTRACT (SCC)

A) CIVIL WORKS AND GENERAL

Definitions and Interpretation

1. In construing these conditions, the specifications, Bill of Quantities and Contract agreement etc the following words and expression shall have the meaning herein assigned to them except where the subject and context otherwise require.

- (a) "Approved" means approved in writing, including subsequent written information of previous verbal approval and "approval" means approval in writing, as aforesaid.
- (b) "As directed" means the direction given by the Engineer in charge/Client
- (c) "Bill of Quantities" or "Schedule of Quantities" means the schedule and quantities of items, materials and rates, summaries etc. priced, and completed and as finally accepted.
- (d) "Constructional Plant" means all appliances or things of whatsoever nature required in or about the execution or maintenance of the Works but does not include materials or other things intended to form or forming part of the Works.
- (e) "Day" means a calendar day of 24 hours (beginning and ending at 00 hrs and 24 hrs respectively) irrespective of number of hours worked or not worked in that day.
- (f) "Week" means seven calendar days without regard to the number of hours worked or not worked in any day in that week.
- (g) "Month" means calendar month without regard to the number of days worked or not worked in that month,
- (i) "Department" means HLL.
- (j) "Drawings" means the drawings given by HLL and referred to in the tender and specifications and any modification of such drawings and such other drawings, calculations and technical information of a like nature as may, from time to time, be issued.
- (k) "I. S." means latest revision of 'Indian Standards Specification' issued by Bureau of Indian Standards.
- (l) "Specifications" means the specification included and/ or referred to in the Tender document and any modification thereof or addition thereto as may from time to time be issued to the Contractor.
- (m) "Materials" means the materials, apparatus, equipment, fittings, fixtures and all such other materials, which are incorporated in the work.
- (n) "Permanent Works" means the permanent works to be executed (including Plant) in accordance with the Contract.
- (o) "Temporary Works" means all temporary works of every kind required in or about the execution and completion or maintenance of the Works and the remedying of any defects therein.

(p) "Urgent Works" means any urgent works which in the opinion of the Client and or Architect becomes necessary at the time of execution and / or during the progress of work to obviate any risk of accident or failure or to obviate any risk of damage to the structure of services or required to accelerate the progress of the work for which becomes necessary for safety and security or for any other reason the Client / HLL may find it necessary.

(q) "Notice in writing" or "written notice" shall mean notice in written, typed or printed characters, sent (unless delivered personally or otherwise proved to have been received) by registered post to the site office/ last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered.

(r) Words imparting the singular only also to include the plural and vice versa where the context requires.

The headings, subheadings and marginal notes (if any) and the catch lines and the Annexure hereto are meant only for convenience of reference and shall not be in any way be taken into account in the interpretation of these presents and the Annexure hereto. The Contractor shall have to carry out and complete the works in every respect in accordance with this contract.

2. Languages & Law

The ruling language .in which the Contract and related aspects shall be drawn up shall be English only. Law means- law as applicable to site of work.

3. Specification & drawings

The drawings furnished to the Contractor shall be interpreted and identified by figured dimensions and nomenclature as indicated therein. On no occasion the drawings shall be scaled off and transferred to work.

In all cases where enlarged detailed drawings are given for any component of work, these drawings shall take precedence over those incorporated in general drawing to a comparatively smaller scale.

a) Prior to the execution of the work, the contractor shall check all drawings, specifications and shall immediately report all errors, discrepancies and/or omissions discovered therein and obtain appropriate orders on the same. Any adjustment made by the Contractor without prior approval shall be at his own risk, each description of item in the schedule of quantities shall be read in injunction with the relevant drawings and the specifications and the Contractor's rate shall be deemed to be for such complete work unless otherwise specified by the Contractor while tendering.

- b) Cost of all shop drawings, or form work drawings and details to be furnished by the Contractor shall be deemed to be included in his tendered rates for the work. Accordingly approval to shop drawings or other fabrication drawings shall not be construed as authorizing award of additional work and as long as these belong to common individual scheme governed by specifications for which the Contractor has already quoted, no extra payment on any account will be admissible for all essential components that are to be necessarily executed to complete the work in all respects.
- c) Prior to submission for approval, the Contractor shall be responsible for thoroughly checking all drawings to ensure that they comply with the intent and requirements of the contract specifications and that they fit with the overall building layout. Drawing found to be inaccurate or otherwise in error will be returned for correction by the Contractor.
- d) The approval of drawing shall not be construed as a complete dimensional check, but will indicate only that the general method of construction and detailing is satisfactory. The Contractor shall be totally responsible for the dimensions and design, safety of the system evolved inclusive of providing interconnected operational accessories adequate enough to accomplish satisfactory completion of work.
- e) In case of difference between drawings and specifications, the specifications shall govern. Anything mentioned in the specification and not shown in the drawings or shown on the drawings but not mentioned in the specifications shall be like effect as if shown or mentioned in both.
- f) In case of errors, omissions and /or disagreement between drawings and specifications, etc. the following order of precedence shall apply:
 - i. Between the written or shown description or dimensions in the drawings and the corresponding one in the specification, the former shall be taken as correct.
 - ii. Between the written description of the item in the specifications and descriptions in the Bill of Quantities of the same item, the latter shall be adopted.
- g) The several documents forming the Contract are to be taken as mutually explanatory of one another, but in case of ambiguity or discrepancies in conditions or specifications the same shall be explained and adjusted by the HLL engineer in charge. In case the Contractor does not agree with the explanation given by the HLL engineer in charge then the matter, on his written notice, will be referred to the higher authority of HLL and his decision shall be final and binding to the contractor.

h) In all cases of omissions and /or doubts or discrepancies in any of the items or specifications, a reference shall be made to the HLL engineer in charge. Elucidation, elaboration or decision of the engineer in charge shall be considered as authentic. The Contractor shall be held responsible for any error that may occur in the work through lack of such reference and precaution.

4. Traffic interference

The Contractor shall conduct his operations so as to interfere as little as possible with the traffic. When interference to traffic is inevitable, notice of such interference shall be given to the HLL engineer in charge well in advance (atleast 2 days). The Contract shall take all precautionary and other measure, such as providing warning signals, temporary diversions etc., all as directed by the HLL engineer in charge. The Contractor shall exercise full care ensure that no damage is caused by him or his workmen, during the operations, to the existing structures, water supply and power lines etc. The cost of any such damage and risks arising out of this shall be entirely borne by the Contractor.

5. Maintenance Period

The maintenance period for the work shall be twelve months and any defects noticed during the period shall have to be rectified by Contractor at his cost, failing which the action taken for rectification by HLL as per relevant shall be final.

6. Scope of Contract

The contract comprises the construction, completion, commissioning/handing over remedying the defect of the works and except in so far as the Contract otherwise stipulates the provision of all labour, materials, constructional plant, machinery temporary works and everything whether of a temporary or permanent nature required in and for such construction, completion and maintenance so far as necessary for providing the same as specified in or reasonably to be inferred from the Contract.

7. Drawings

(a) Tender Drawings

The tender drawings furnished are for Tender Purpose only and are intended as a guide to the Bidder/ Contractor and give general layout of buildings and general information of the structures and general positions of utilities, services and equipments only. Contractor's quoted rate for any item should not be based on any measurement, quantity, and

specification from these drawings. Any claim raised by the contractor in this regard shall not be valid in this contract and shall not be accepted by HLL.

(b) Issue and custody of drawings & specifications

The contractor shall be furnished free of cost three copies of all drawings and all further drawings issued during the progress of the works. The contractor shall keep one copy of all drawings at the works site and the HLL shall at all reasonable time have access to the same.

Before the issue of the final certificate to the contractor, he shall forthwith return all drawings and specifications.

The drawings shall be provided to the Contractor as per the schedule (prepared at the starting of the works during the progress of work and necessarily updated or revised time to time) mutually agreed by the HLL and the Contractor.

From time to time during the course of contract revised drawings may be issued to the Contractor and the Contractor shall ensure that all superseded drawings are removed from site and stored in a lockable cabinet as directed.

The Contractor shall maintain complete up to date Register of drawings to be maintained at site. All drawings shall be properly filed and indexed for ready reference. The contractor shall ensure that only the valid up to date drawings are used for setting out, construction and preparation of shop drawings etc.

(c) Working Drawings

Working drawings shall mean any of all drawings, required for satisfactory execution of the work except Bar Bending Schedule, shop and fabrication drawings. Three sets of all the working drawings shall be provided to the contractor.

Bar Bending Schedule, shop and fabrication drawings etc. will not be provided. The Contractor shall have to prepare the Bar Bending Schedule, shop and fabrication drawings etc. free of cost, if required for any of the items of work. Five copies of these drawings each including for revision will be submitted to HLL Engineer in charge for approval. Before executing the item, shop drawings should be approved by the HLL Engineer in charge.

The Contractor shall be entirely responsible for co-ordination of entire work at site including the works carried out and shall ensure that all necessary working drawings are properly prepared & executed by the Contractor.

Review and approval will not extend to means, methods, techniques, sequences or procedures of construction. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

(d) As-Built Drawings (related to working drawings)

"As Built Drawings" shall be provided by Contractor at the time of handing over and shall be prepared by the Contractor at his own cost.

As-built drawings shall be under preparation from the onset of the contract, in order that all minor amendments and discrepancies from the "Working Drawings" are incorporated. To ensure that this requirement is complied with Engineer in charge shall inspect the works as the Works proceed. The Contractor shall submit 5 sets of "As Built" drawings along with soft copy in CD.

8. Disruption of Progress

- (a) The Contractor shall give adequate advance notice to the Engineer in charge whenever planning or progress of the Works is likely to be delayed or disrupted unless any further drawing or order, including a direction, instruction or approval is received. The notice shall include details of the drawing or order required explaining why and by when it is required and of any delay or disruption likely to be suffered if it is late.

9. Drawings and Instructions

The contractor shall carry out and complete the said work in every respect in accordance with this Contract and with the directions of and to the satisfaction of the Engineer in charge.

The contractor shall forthwith comply with and duly execute any work comprised such as Engineer in charge's instructions provided always that verbal instructions, directions and explanations given to the contractor or his representative upon the works by the Engineer in charge, shall, if involving a variation, be confirmed in writing by the contractor within seven days.

10. Contractor's General Responsibilities

- (a) Execution of works:

The Contractor shall, subject to the provisions of the Contract, and with due care and diligence, execute and complete the Works & remedy any defects therein in accordance with the Contract.

The Contractor shall provide all labour, including the supervision thereof, materials, Constructional Plant and Machineries and all other things, whether of a temporary or permanent nature, required in and for such execution, completion, maintenance and remedying of any defects, so far as the necessity for providing the same is specified in or is reasonably to be inferred from the Contract.

The contractor is bound to carry out any items of work necessary for the completion of the job even though such items are not included in the bill of quantities and instructions in respect of such additional items and their quantities will be issued in writing by the Engineer in charge.

The contractor shall have to use materials from the makes / manufacturers specified in the list of materials of approved brand and/or manufacture contained in the contract documents and as approved by Engineer in charge. Wherever different pattern/ Design/ Quality of materials with same specification/ make as specified in the contract, is available in the market, Engineer in charge will approve the pattern/ Design/ Quality of the material/ item which shall be final and binding on the contractor.

HLL is empowered to cancel an approval of material if it is found subsequently that approved material once brought at site and tested does not meet the requirement as specified in the contract. In such case approval will be accorded for alternate material.

(b) Adequacy, stability and safety:

The Contractor shall take full responsibility for the adequacy, stability and safety of all site operations and methods of construction.

(c) Temporary works and arrangements:

The Contractor shall furnish to the Engineer in charge full particulars of all temporary works necessary for the execution of the works. The Engineer in charge may comment on the Contractor's proposals if they consider that modifications should be made. The Contractor shall be solely responsible for the stability and safety of all temporary works. The Engineer in charge will indicate the site(s) for such temporary works and the Contractor will have to restrict his requirements to the same. Should it be necessary to shift the temporary works to some other allotted place during the execution of the works, the Contractor shall do so, when informed by the Engineer in charge, at his own cost and without delay or demur. Such shifting of temporary works may be in part or in full.

(d) Initial and Final Clearance of site for temporary works:

The Contractor shall be responsible for the clearance of the site of all scrub, debris, rubbish, etc. to be removed off site to a location approved by the HLL Engineer in charge. The structures, services and works required to be demolished and removed shall also be removed off site to a location as mentioned above. The Contractor shall obtain necessary permissions and approvals from the local authorities for such disposals. The demolition shall include digging, excavating and removal of substructures, foundations and buried works. The cost of all this shall be borne by the Contractor.

The above is applicable for all site offices, labour camps, and godowns etc., which are not required after the works is fully completed.

(e) Storage, Cleaning and Dewatering

The Contractor shall at all the times during construction keep the Site clean and free from all debris and unwanted materials on a daily basis as per instructions of the HLL Engineer in charge.

Storage of materials shall be in an organized manner and in proper compartments as directed by HLL Engineer in charge. Storage on suspended floors shall not be permitted unless specifically approved in writing by the HLL Engineer in charge for specific materials in specific locations and in approved manner. HLL Engineer in charge shall be furnished with load details, if requested, before seeking approval for storage.

Regular cleaning operations shall be undertaken to remove all dust, debris, waste materials etc. A cleaning schedule shall be maintained.

Contractor shall make his own arrangement for storage of those materials, which can be accommodated at site. Contractor shall be fully responsible for safe custody of the same. Materials shall be considered as "Delivered at Site" only after the physical presence of materials at site are verified by the HLL Engineer in charge. Stores elsewhere shall not be eligible for being considered as "Delivered at Site."

Contractor shall be responsible to keep entire site free from water due to water coming from any source at any level and shall protect all materials and works from being damaged by the water from any source. Contractor shall make proper arrangements for drainage prior to use of water for curing, testing, cleaning etc.

Any expenditure incurred by the Contractor in fulfillment of his obligations under this sub-clause shall be deemed to have been included in the Contract Sum.

(f) Coordination of builders work required for services and Installation of equipments:

The Contractor shall co-ordinate the requirements for openings/cutouts/inserts/ fixtures for internal and external services installations in accordance with the requirements of the relevant drawings.

The Contractor's attention is also drawn to the fact that all openings/chases, etc. shall be left in the building work as it proceeds and not cut-out subsequently except in so far as may be necessary due to subsequent authorized instructions. The Contractor shall therefore obtain necessary builders work details in such order and in such time as to enable them to be checked and approved by the HLL Engineer in charge before the actual construction is planned to take place.

12. Operation & Storage Areas

All operations of the Contractor shall be confined to areas authorized by HLL Engineer in charge and the storage of materials shall be over sites specifically indicated by the HLL Engineer in charge. The Contractor shall be obliged to keep the premises in hygienic conditions by proper drainage of the areas, provided with suitable approaches, throughout the period of contract. He shall rectify all damages caused to any property of client within the area thus allotted. He shall be responsible to clear all vegetation at site at his own cost.

13. Transportation of Equipment and materials

It shall be the Contractor's responsibility to transport all equipment and materials to the jobsite at his own expense. The Contractor shall use only established roadways or construct and use such temporary roadways as may be necessary and approved by the HLL Engineer in charge. When it is necessary to cross curbing or sidewalks, protection against damage shall be provided by the Contractor. Any damage caused to roads, curbs, sidewalks etc., shall be repaired by the Contractor at his own expense.

14. Inspection

The work shall be carried out under the directions of the HLL Engineer in charge to ensure strict compliance with the terms, specifications and conditions of the contract. Any failure on the part of the HLL Engineer in charge or his representative during the progress of inspection of work to discover any defective work or to reject materials not upto standards shall not be deemed to have been accepted and should not be construed as waived. Any defects noticed either during the period of construction or after the completion upto a period of 12 months from the date issue of certificate of completion, the Contractor is liable to carry out all repairs/rectifications at his/their own cost to the satisfaction of HLL. Further in the event of the Contractor using substandard/ inferior quality of materials which at future date is not susceptible to

replacement, for structural reasons or otherwise and if concurrence is given for retention of such structure, HLL will have necessary authority to recover a proportionate sum decided as per its discretion. In case the structure with the use of substandard or inferior material cannot be retained in the work as per the opinion of the Engineer in charge, portion or portions of such structure/ work shall be dismantled and replaced new by the Contractor at his own cost. Partial or entire occupancy of the premises shall not be construed as the acceptance of the work or materials incorporated in the work. No changes whatsoever to any provision of the specification shall be made without written authorization from the HLL Engineer in charge.

15. Schedule of Quantities

Schedule of probable quantities in respect of the work are liable to alterations, omissions, deductions or additions.

16. Tender Rates/ Statutory Deductions

Statutory deductions, where, in pursuant to statutes of Government, becomes obligatory to HLL, the same would be deducted at the rates specified under the said act, from the amount payable to Contractor as per the relevant acts applicable for the contracted work, as amended from time to time.

The Contractor when called for by HLL should furnish detailed analysis in support of the rates quoted by him against each item of tender. HLL reserves the right to utilize the analysis thus supplied in settling any deviations or claims arising on this contract.

17. Watching & Lighting

The Contractor shall throughout the execution and completion of the Works and the remedying of the site and the Works and the remedying of any defects therein have full regard for the safety of all persons entitled to be on the site and keep the site and the Works in an orderly state appropriate to the avoidance of danger to such persons and in connection with the Works provide and maintain at his own cost all lights, guards, fencing and watching when and where necessary or required by the HLL Engineer in charge, or by any duly constituted authority, for the execution and for the protection of the Work, and/or for the safety and convenience of the public or others and take all reasonable steps to protect the environment on and off the site and to avoid damage or nuisance to person or property of the public or others resulting from pollution, noise and other causes as a consequence of his methods of operation.

18. Care of Works

From the commencement to the certified completion of the whole of works, the contractor shall take full responsibility for the care thereof and of all temporary works and in case any damage loss or injury shall happen to the works or to any part thereof or to any temporary works from any cause whatsoever save and except the expected risks as defined in the relevant clauses.

The contractor shall at his own cost repair and make good the same so that on completion, the works shall be in good order and condition and conformity to every respect with the requirements of the contract and Engineer in charge's instructions. The contractor shall also be liable for any damage to the works occasioned by him including his subcontractors in the course of any operations carried out by him. The contractor shall indemnify the Employer from all risks on this account.

19. Force Majeure

(a) Force Majeure

- i) Any failure or delay in the performance by either party hereto of its obligations under his Contract shall not constitute a breach thereof or give rise to any claims for damages if, and to the extent that it is caused by occurrences beyond the control of the party affected, namely, acts of God, floods, explosions, wars, riots, storms, earthquakes, insurrection, epidemic or other natural disasters. The party so affected shall continue to take all actions reasonably within its power to comply as far as possible with its obligations under this Contract. The affected party shall promptly notify the other party after the occurrence of the relevant event and shall use every reasonable effort to minimize the effects of such event and act in all good faith with due care and diligence.
- ii) In the event of the effect of force majeure continuing beyond the period of One hundred and eighty (180) days, the parties shall mutually decide whether or not to terminate this Contract. In the event of termination of contract the contractor shall be paid for the work done and which has been accepted and certified by the Engineer in charge and shall not assert any additional claims against HLL.

20. Contractor's Superintendence

- (a) The contractor shall be solely responsible for the means, methods, techniques sequence and procedure of construction. The Contractor shall be responsible to see the completed work complies accurately with the Contract Document.

The Contractor shall give or provide all necessary superintendence during the execution of the Works.

(b) Contractor's Technical Representative for Execution & Coordination of Works

The Contractor shall have on site all times during working hours throughout the course of the Contract at least one Competent Technical representative who shall be empowered to make decisions binding on the Contractor in respect of all matters likely to arise in connection with the execution & coordination of the works at the site and shall keep the Engineer in charge informed at all times about the name and designation of such representative. Any direction, explanations, instructions or notices given by the Engineer in charge or his authorized representative to such representative shall be held to be given to the Contractor. In case of absence of Technical Representative from the site other alternative representative must be available at site with same powers.

The curriculum vitae (CV) of key personnel proposed to be deployed at site for the entire duration is also required to be submitted.

The contractor under normal circumstances would not be allowed to replace the key personnel during the execution of the contract. However, for any reasons, due to unavoidable circumstances if it becomes necessary in the interest of the project to replace any key personnel, the contractor must submit the CV of the new personnel (having similar qualification and experience) to the Engineer in charge for approval.

(c) Contractor's Employees

The Contractor shall provide and employ, Engineering staff/ Technical Assistants on the site, in connection with the execution/ completion of works and remedying any defects therein. The Engineering staff / Technical Assistants shall be appropriately qualified, skilled and experienced in their respective disciplines/ trades, for proper supervision, ensuring quality, and output of the work they are required to supervise, and also such skilled, semi-skilled and unskilled labour as are necessary for the proper and timely execution, completion of work and remedying any defects in the works. No child labour shall be employed on the work.

(d) Removal of Contractor's Employees

The Contractor shall on the direction of the Engineer in charge immediately dismiss from the works any person employed thereon by him who may, in the opinion of the Engineer in charge be incompetent or misconduct himself and such person shall not be again employed on the works without the permission of the Engineer in charge.

(e) Unauthorized Persons

No unauthorized persons are allowed on the site. The Contractor shall instruct all such persons to keep out and shall take steps to prevent trespassing. However the contractor will make sure to provide free access at any time to Engineer in charge to the site and other working places.

21. Compliance with Statutes, Regulations, etc.

The contractor shall conform to the provisions of any statute, ordinance, law, act of the legislature relating to the works, and to the regulations and by-laws of any local or other duly constituted authority and of any water, electric supply and other companies and/or authorities with whose systems the structure is proposed to be connected. The Contractor shall keep the HLL/ client indemnified against all fines or penalties or liability of every kind for breach of any such statutory ordinance, law act of the legislation, regulations, and byelaws as aforesaid.

The contractor shall before making any variations from the drawings or specifications that may be necessitated by so regulations give to the Engineer in charge written notice, specifying the variation proposed to be made and the reasons for making it and apply for instructions thereon. The contractor will not execute any work without written permission from the Engineer in charge.

The contractor shall bring to the attention of the Engineer in charge all notices required for execution by the said acts, regulations or bye-laws to be given to any authority and pay to such authority, or to any public office all fees that may be properly chargeable in respect of the works, and lodge the receipts with HLL.

22. Setting out

The contractor shall be responsible for the true and proper setting-out of the Works in relation to original points, lines and levels or reference issued by HLL Engineer in charge in drawing or in writing and for the correctness, subject as above mentioned, of the position, levels, dimensions and alignment of all parts of works and for the provision of all necessary instruments, appliances and labour in connection therewith. If, at any time during the progress of the works, and during defects liability period, any error shall appear or arise in the position, levels, dimensions or alignment of any part of the Works, the Contractor, on being required to do by the Engineer in charge or his authorised representative shall at his own cost, rectify such error to the satisfaction of the Engineer in charge. The checking of any setting out or of any line or level by the Engineer in charge shall not in any way relieve the Contractor of his responsibility for the correctness thereof. The Contractor shall carefully protect and preserve the benchmarks; sight-rails, pegs and other things used in setting-out the Works. Any rectification works required should be done by the Contractor at his own cost.

23. Quality of Materials, Workmanship and Tests

(a) All materials and workmanship shall be the best of the respective kinds described in the Contract and shall be subjected from time to time to mandatory tests at the place of manufacture or fabrication or on the Site or at an approved testing laboratory. The source of supply and / or manufacturing within/ outside India may be inspected by the Client / any representative as nominated by the client.

The contractor shall upon the instruction of the Engineer in charge's representative furnish him with documentation to prove that the materials & goods comply with the requirements of contract and for requirement stated above. The Architect may issue instruction in regard to removal of material from site or any work, if these are not in accordance with the contract. The contractor shall provide such assistance instruments, machinery, labour and materials as are normally required for examining, measuring, sampling and testing and material or part of work before incorporation in the works for testing as may be selected and required by the Engineer in charge.

Client may carry out Third Party Quality Assurance/ Audit by an independent agency/ individual/ firm/ institute at any time. The agency will be permitted and offered all support related to site inspection by the contractor. Improvements/changes suggested therein will be carried out without any extra cost.

(b) Samples

i) All samples of adequate numbers, sizes, shades & pattern as per specification shall be supplied by the contractor without any extra charge. Contractor shall submit Samples to the Engineer in charge for approval. If certain items proposed to be used are of such nature that samples cannot be presented or prepared at the site, detailed literature / test certificate of the same shall be provided to the satisfaction of the Engineer in charge. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalogue numbers and the use for which intended and other details as the Engineer in charge may require to review the submittals for the limited purposes required by paragraph (d) below. The numbers of each Sample to be submitted will be as specified in the Specifications, or as shall be specified by the Engineer in charge. All approved samples shall be properly marked with signature of the Engineer in charge and shall be available at the site for inspection at any time. The sample room will be made and maintained with all the samples approved till the end of warranty period / defect liability period.

ii) Submittal Procedures

- (a) Before submitting each Sample, Contractor shall have determined and verified all materials with respect to intended use, fabrication, shipping, handling, storage, assembling and installation pertaining to the performance of the Work. It shall be Contractor's sole responsibility in respect of means, methods, techniques, sequences and procedures of construction and safety precautions and programmes incidental thereto.
 - (b) Each submittal will bear a specific written indication that Contractor has satisfied Contractor's obligation under the Contract Documents with respect to Contractor's review and approval of that submittal.
 - (c) At the time of each submission, contractor shall give Architect specific written notice of such variations if any that the sample submitted may have from the requirements of the contract document, such notice to be separate from the submittal and in addition shall cause a specific notation to be made on each sample submitted for review and approval of each such variation.
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- iii) Review and Approval: Sample shall be reviewed and approved only to determine if the items covered by the submittals will, after installation or incorporation in the work, conform to the information given in the contract documents and be compatible with the design concept of the completed project functioning as a whole as indicated by the contract documents, drawings etc.
 - iv) Review and approval will not extend to means, methods, techniques, sequences or procedures of construction. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. Contractor shall make corrections required by the Engineer in charge and submit as required new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for and by Engineer in charge on previous submittals.
 - v) Above referred review and approval of Samples shall not relieve the Contractor from the responsibility for any variation from the requirements of the Contract Document unless the Contractor has in writing called Engineer in charge's attention to each such variation at the time of submission as specified above and received written approval of each such variation by specific written notation thereof incorporated in or accompanying the Sample approval; nor will any approval by the Engineer in charge relieve the Contractor from the responsibility for complying with the requirements of contract.
 - vi) Only when the samples are approved by the Engineer in charge, the contractor shall proceed with the procurement and installation of the particular material / equipment. The approved samples shall be signed by the Engineer in charge for identification and shall be kept on record at site office until the completion and acceptance of the work and

shall be available at the site for inspection/ comparison at any time. The contractor shall keep with him a duplicate of such samples to enable him to process the matter.

- vii) For items of works where the samples are to be made at the site, the same procedure shall be followed. All such samples shall be prepared at a place where it can be left undisturbed until the completion of the project.
- viii) The Engineer in charge shall communicate the comments/ approval to the Contractor to the samples at his earliest convenience. Any delay that might occur in approving of the samples for reasons of its not meeting with the specifications or other discrepancies, inadequacy in furnishing samples of best qualities from various manufacturers and such other aspects causing delay on the approval of the materials/ equipment's etc. shall be to the account of the contractor. In this respect the decision of the Engineer in charge shall be the final.
- ix) On delivery of the supplies of materials/ equipments for permanent works at the site, the contractor shall specifically arrange to get the supply inspected by the Engineer in charge and compared with the approved sample and his specific approval obtained before using the same in the work.

(c) Cost of Tests

The testing charges shall be borne by the Contractor intended by or provided for the Contract or as found necessary by the Engineer in charge for ascertaining whether the quality of materials intended to be used by the Contractor in the Works is acceptable, whether any finished or partially finished work is appropriate for the purposes which it was intended to fulfill. The cost of making samples, transportation etc. shall also be borne by the Contractor.

(d) Standards and codes

The Contractor shall at his cost provide one set of approved standards and codes to which the Proposed materials, items and works to be executed shall conform. Such a set shall be handed over to Engineer in charge for ready reference. All materials, items and works, when submitted for approval shall have reference to Tender Specifications and drawings and of clauses of relevant standard codes for acceptance criteria.

(e) Testing facilities

The Contractor shall, at his own cost, provide testing facilities at site as stipulated in the Contract document.

In respect of tests carried out in other approved laboratories, as stipulated in the contract document / as directed by the Engineer in charge, the Contractor shall arrange for taking samples, testing etc. The charges/testing fee will be borne by the Contractor.

f) The contractor shall prepare Quality Control Manual duly considering the above and the Quality Control document of the Engineer in charge and get it approved by the client for compliance.

24. Government Labour Laws

The contractor has to follow strictly the Government labour acts, which are in force at present and all necessary arrangements for labour will have to be made by the Contractor.

25. Obtaining Information related to Execution of work

No claim by the contractor for additional payment will be entertained which in consequent upon failure on his part to obtain correct information as to any matter affecting the execution of the works, nor will any misunderstanding or the obtaining of incorrect information or the failure to obtain information relieve him from any risks or from the entire responsibility for the fulfillment of the contract.

26. Access for Inspection

Persons nominated by Engineer in charge and their respective representatives shall at all reasonable times have free access to work and/ or to the workshops, factories or other places where materials are lying or from which they are being obtained and the Contractor shall extend necessary service to Engineer in charge and their representatives every facility necessary for checking measurements, inspection and examination and test of the materials and workmanship.

27. Examination of Work before covering up

- (a) No part of the works shall be covered up or put out of view without the approval of the Engineer in charge and the contractor shall afford full opportunity for the Engineer in charge to examine and measure any work which is about to be covered up or put out of view and to examine foundations before permanent work is placed thereon. The contractor shall give due notice to the Engineer in charge whenever any such work or foundation is or ready or about to be ready for examination and the Architect shall attend the same.

(b) Uncovering and making openings

The contractor shall uncover any part or parts of the works or make openings in or through the same as the Engineer in charge may from time to time direct and shall reinstate to make good such part or parts to the satisfaction of the Engineer in charge. No extra payment will be paid for this.

28. Assignment

The contractor shall not, without the prior consent of HLL assign the Contract or any part thereof, or any benefit or interest therein or there under, otherwise than by:

A change in favour of the Contractor's bankers of any moneys due or to become due under the Contract, or Assignment to the Contractor's insurers (in case where the insurers have discharged the Contractor's loss or liability) of the Contractor's right to obtain relief against any other party liable.

The Contractor shall not sub-contract the whole of the Works. The Contractor shall not subcontract any part of the Works without the prior consent of the Client, except where otherwise provided by the Contract. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any Subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen. Such Permission may be granted only for the specialized works etc and the decision of the Client shall be final in this regard.

29. Claims

The contractor shall send to the Engineer in charge once in every month an account giving particulars as complete and fully detailed as required for any claim for additional payments, to which the contractor may consider himself entitled and of all extra or additional/ substituted work ordered by the Engineer in charge which he has executed during the preceding month subject to provisions under relevant clauses of the contract hereof.

30. Variations

(a) The Engineer in charge with the prior approval of the Competent Authority in determining revised quantity, form or quality shall make and variation in the form, quality or quantity of the works or any part thereof that may necessary and for that purpose or if for any other reason it shall, in his opinion be desirable, he shall with the prior approval of the Client order

the contractor to do and the contractor shall do any of the following, subject to the provisions of other contract conditions.

- i) Increase or decrease the quantity of any work included in the contract
- ii) Omit any such work
- iii) Change the character or quality or kind of any such work
- iv) Change the levels, lines, positions and dimensions of any part of the works.
- v) Execute additional work of any kind necessary for the completion of the works.
- vi) Change any specified sequence or timing of construction of any part of the work.

No such variation shall in any way vitiate or invalidate the contract, but the cost, if any, of all such variations shall be taken in account for payment to the contractor as an addition or adjustment to the amount of the contract sum. Provided that where the issue of instruction to vary the works is necessitated by some default or breach by the contractor or for which he is responsible, any additional cost attributable to such default or breach shall be borne by the contractor.

(b) The contractor shall make no such variations without the concurrence of HLL Engineer in charge

31. Inspection and Testing

(a) Inspection & Testing during manufacture

The Engineer in charge shall be entitled during manufacture to inspect, examine and test on the contractor's premises during working hours the materials and workmanship and check the progress of manufacture of all fabrication materials to be supplied under the contract, and if part of the said materials is being manufactured on other premises the contractor shall obtain for the Engineer in charge permission to inspect, examine and test as if the said plant were being manufactured on the contractors premises. Such inspection, examination or testing if made shall not relieve the contractor from any obligation under the contract.

(b) Facilities for Testing at Manufacturer's Works

Where the contract provides for tests on the premises of the contractor or of any subcontractor the contractor shall provide such assistance, labour, materials, electricity, fuel, stores, apparatus and instruments as may be requisite and as may be reasonably demanded to carry out such tests efficiently.

(c) Certificate of Testing

As and when fabrication materials shall pass the tests referred in this clause, the Engineer in charge shall furnish to the contractor a certificate in writing to that effect.

(c) Rejection

If as a result of such inspection, examination or test of the works (other than a Test on Completion) the Engineer in charge shall decide that such material is defective or not in accordance, with the contract he shall notify the contractor accordingly in writing his objection and reasons thereof. The contractor shall make good the defect or ensure that the material complies with the specifications. Thereafter, if required, the tests shall be repeated under the same terms and conditions till satisfactory results are obtained.

(d) Inspection Reports

The contractor shall provide the Engineer in charge with five copies of reports of all inspection and tests.

32. Virtual Completion Certificate

When the whole of the Works have been substantially and virtually completed and have satisfactorily passed any final test that may be prescribed by the Contract and is fit for occupation / use:-

- (a) The Contractor shall give a notice to that effect to the Engineer in charge accompanied by an undertaking to finish any outstanding work during the Defects Liability Period. Such notice and undertaking shall be in writing and shall be deemed to be a request by the Contractor.
- (b) The Engineer in charge shall review whether the works are completed in such a condition so as to be put to its proper or other intended final use and / or occupied without any short comings and no major or minor items of works are remaining which in the opinion of the Engineer in charge will cause undue difficulties in satisfactory use/ occupation of the buildings.

33. Defects after completion

(a) General

Any defect, shrinkage, settlement or other faults which if appearing within the "Defects Liability Period" arising due to poor quality of materials or workmanship, shall upon the direction in

writing of the Engineer in charge and within such reasonable time as shall be specified therein, be attended and made good by the contractor, at his own cost. In case of default HLL may employ and pay other persons to make good such defects, shrinkage, settlements or other faults and all damages, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the contractor and such damage, loss and expenses shall be recoverable from the bills due or may be deducted from any money that may become due to the contractor, or may in lieu of such amending and making good by the contractor deduct from any sum due to the contractor, the amount to be determined by the HLL.

(b) Cost of Execution of Work of Repair, etc.

All such works shall be carried out by the Contractor at his own expense if the necessity thereof shall, in the opinion of HLL Engineer in charge, be due to the use of materials or workmanship not in accordance with the Contract, or due to neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract.

(c) Contractor's personnel to be at site

During the defects liability period the contractor shall retain at least one of his authorized representative at site along with required tradesmen.

34. Approval and acceptance

(a) Provisional Acceptance

The work shall be deemed to have been provisionally accepted after fulfillment of the following by the Contractor.

- i). Submitting As-Built Drawings, Catalogues, Brochures, and Data Sheets, manuals in the form as directed by Engineer in charge
- ii). Obtaining Certificate of Completion from Engineer in charge

(b) Certificate of Final Completion

The contract shall not be considered as completed until a Certificate of Final Completion shall have been issued by the Engineer in charge stating that the Works have been completed to their satisfaction and remedying/ rectifying of defects have been satisfactorily performed.

35. Works by Other Agencies

The Engineer in charge reserves the right to use premises and any portion of the site for the execution of any work not included in this contract which it may desire to have carried out by other persons simultaneously, and the contractor shall allow reasonable facilities for the execution of such work, but shall not be required to provide any plant or material for the execution of such work except by special arrangement with the employer. Such work shall be carried out in such manner as not to impede the progress of the works included in the contract and the contractor shall not be responsible for any damage or delay which may happen to or occasioned by such work.

36. Insurance Policies

- (a) Contractor shall take "Contractor's All Risk Policy" and Third Party Insurance or other insurance policies in the joint name of the Contractor, HLL and Client and keep it valid against all loss or damages to the Works, Materials, Equipment, Persons and Properties from whatever cause arising for which he is responsible under the terms of the Contract, other than the expected risks, and in such manner that the HLL, Client and Contractor are covered for the period as stipulated for entire duration including the Defects Liability Period and for any loss or damage occasioned by the Contractor in the course of any operations carried out by him for the purpose of complying with the obligations.
- (b) In the event of the Insurance Policies are taken and kept valid by the contractor, whenever claims need to be made for any matter or thing in respect of the insurance covered under the Insurance Policies, it shall be the responsibility of the Contractor to lodge such claims and to follow up and obtain the payments for the claims from the Insurance Companies. Should the HLL/Client suffers any losses and or damages in connection with the works and the Contractor is unable or unwilling to get such losses and or damages reimbursed by the insurance companies, the HLL shall recover the amounts in respect of such losses and or damages from the Contractor by way of deductions made from any money that may be payable or that may become payable to the Contractor.
- (c) Irrespective of whether the Insurance Policies referred under sub-clause above are taken by the Contractor or not and whether the Policies are kept valid or not notwithstanding anything stated in the sub-clause as above of this clause, the Contractor shall indemnify the HLL/ Client from all the compensations and claims that may arise due to loss and damages to the works, materials, equipment, persons and properties on account of Contractor's operations at site during the period and also Defects Liability period and the Contractor shall be responsible, liable and bound to the HLL/ Client to compensate or make good or replace the loss or damage arising out of any event whatsoever as directed by the HLL.

37. Dues not paid by the Contractor

The contractor shall pay all dues or fees to Statutory authorities and Electricity and Water supply authorities etc. wherever required within the due period and indemnify the HLL/ Client from any claims or compensations or penalties or damages arising out of non-payment of any such dues or fees. However, in case some dues or fees are not paid by him / and or claims for compensations or penalties etc. are raised by the Statutory authorities, HLL may deposit the required amount for any or all of the above and recover or deduct the same from any money payable to the contractor by the HLL/ client or any other means available to the HLL/client.

38. Specifications

The various works indicated in the schedule shall be carried out strictly in accordance with the detailed specification whether actually mentioned or not. Where specifications are not available in this document, such work shall be carried out strictly in accordance with CPWD specification and if there is no details in CPWD specification book then it shall be executed as per Bureau of Indian Standard specification. In case there is no such specifications in Bureau of Indian Standards the work shall be carried out in all respects in accordance with the instructions and requirement of the Engineer in charge.

39. Urgent Repairs

If, by reason of any accident, or failure, or other event occurring to or in connection with the works, or any part thereof, either during the execution of the works, or during the Defects Liability period any remedial or other work or repair, shall, in the opinion of the HLL be urgently necessary for the safety of the Works and the Contractor is unable or unwilling at once to do such work or repair, the HLL may employ and pay other persons to carry out such work or repair as the case may be and Client may consider necessary. If the work or repair so done by the other agency is the work which, in the opinion of the Engineer in charge the Contractor was liable to do at his own expense under the Contract, all expenses incurred by Other agency in doing so shall be recoverable from the Contractor by the HLL, or may be deducted by HLL from any sum due or which may become due to the Contractor.

40. Boreholes & Exploratory Excavation

If, at any time during the execution of the Works, the Engineer in charge shall require the Contractor to make boreholes or to carry out exploratory excavation, such requirement shall be ordered in writing and shall be deemed to be an additional item ordered under the provisions unless a provisional sum in respect of such anticipated work shall have been included in the schedule of items.

41. Fossils, Etc.

All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the site of the works shall be the property of HLL.

42. Plant Temporary Works & Materials

(a) Plant, Temporary Works etc. Exclusive use for the Works

All Constructional Plant, Temporary Works and materials provided by the Contractor shall, when brought on to the Site, be deemed to be exclusively intended for the execution of the Works and the Contractor shall not remove the same or any part thereof except for the purpose of moving it from one part of the Site to another, without the consent, in writing of the Engineer in charge, which shall not be unreasonably withheld.

(b) Removal of Plant etc.

Upon completion of the Works, the Contractor shall remove from the Site all the said Constructional Plant and Temporary Works remaining thereon and any unused materials provided by the Contractor, within 10 days of obtaining the completion certificate.

43. Operations and Maintenance Manual

The Contractor shall also provide and submit to HLL three copies in a durable plastic case of the operating and Maintenance Instruction Manuals as may be applicable for the works. The arrangement of these manuals shall be as follows:

SECTION A: Index

SECTION B: Full set of Indexed Photographs showing all salient features of the Project.

SECTION C: Description and details of materials, items and fittings and fixtures used for the project along with Catalogues & Addresses of the Suppliers.

SECTION D: Planned maintenance instruction and dates for order replacements.

SECTION E: List of recommended Spare parts of consumables.

SECTION F: List of "As-Built" Drawings (related to Working/Shop drawings)

Until the Drawings, prints, transparencies and manuals referred to above have been received and approved by the Engineer in charge the Contract shall not be considered as complete and payment of sum will be withheld until such drawings, etc. have been submitted to and approved

by the Engineer in charge and the cost of providing such records including proper submission thereof is deemed to be included in the Contract Sum quoted by the Contractor.

44. Reports by Contractor

- (a) The contractor shall maintain daily weather record. Any other inclemency in weather shall be recorded.
- (b) The Contractor shall file daily category-wise labour report. The report shall indicate scheduled requirement against actual strength.
- (c) The Contractor shall prepare Weekly Reports of planned and actual progress of work and subsequent week's scheduled work. These will also include material procurement status. These reports shall be submitted to the Engineer in charge & shall be reviewed in Review / Coordination Meetings.
- (d) The Contractor shall submit Monthly Progress Report as per format approved by Engineer in charge.
- (e) The Contractor, as directed by the Engineer in charge shall prepare other Progress Charts and Schedules as may be required.

45. Office Accommodation for Contractor & HLL

- (i) The Contractor shall provide and maintain necessary office(s), workshops, stores, sanitary facilities, canteens etc. for themselves and also for HLL at site with the approval of the Engineer in charge. A suitable layout for this shall be made and got approved by the Engineer in charge.
- (ii) The Contractor shall install and maintain telephones/ fax facility with required extensions and computers having latest configuration and internet facility at his own cost for HLL and shall pay all the bills for the calls/ charges and maintenance.

46. Labour Camp

The Contractor has to make their own arrangements for providing accommodation and other facilities for the labourers nearer to the site.

47. Miscellaneous

- (a) Monthly Progress Photographs

The Contractor shall arrange at his own cost to maintain a progress record of the works by taking postcard size colour photographs (preferably digitized photographs) minimum 7 Nos. or more per month or fortnight as directed by the Engineer in charge during the constructions

stages and after completion and shall supply one set to the Client and one set to the Engineer in charge at no extra cost. The Contractor will be required to submit monthly reports on the progress of his work as per the format approved by the Engineer in charge.

(b) Safety Regulations

Contractor shall be fully responsible for the safety of his Employees/ Visitors/ Contract Labour/ Sub-Contractors Labour. The Contractor shall provide first-aid box readily available at site. The Contractor shall provide all safety measures as per labour safety rules applicable.

(c) Labour Laws

The Contractor shall strictly adhere to all labour laws prevailing in the region. The contractor shall make timely payment of wages of his labour and the wages paid to the labour shall be equal to or more than the minimum wage prevailing at the time of payment. The Contractor shall comply with all applicable labour legislation.

(d) By-Laws of Statutory Authorities

The Contractor and his labour shall not violate municipal/ sanitation/ health or any other byelaws.

(e) Tax Deduction at Source

Taxes and surcharge as applicable, shall be deducted from the amount paid to the Contractor towards the value of the work done.

(f) General Lighting and Securities

The Contractor shall, throughout the execution, completion and remedying of the defects, provide and maintain at his own cost all lights, guards, fencing, warning signs and watching, when and where necessary or recommended by the Engineer in charge or by any duly constituted authority for the protection, of the works or for the safety and convenience of the public or others.

(g) Technical Examination

HLL shall have the right to cause Audit and Technical Examination of the works .The bills of the contractor including all supporting vouchers, abstracts, etc. to be made as per payments of the final bill and if as a result of such Audit and Technical Examination any sum is found to have been overpaid in respect of any work done, the contractor shall be liable to refund the amount of over payment and it shall be lawful for HLL to recover the same from the security deposit or

Performance Security of the contractor or from any dues payable to the contractor. If it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him, the amount of such under payment shall be duly paid.

In the case of any audit examination and recovery consequent on the same the contractor shall be given an opportunity to explain his case and the decision of HLL shall be final.

In the case of Technical Audit, consequent on which there is a recovery from the contractor, recovery should be made with orders of the Accepting authority whose decision shall be final. All action under this clause should be initiated and intimated to the contractor within the period of twelve months from the date of completion.

(h) Site Order book

For the purpose of quick communication between Engineer in charge and the Contractor / his representative, site order book shall be maintained at site as described below:

Any communication, relating to the works may be conveyed through recording in the site order book. Such a communication from HLL Engineer in charge to the Contractor shall be deemed to have been adequately served in terms of the contract. The site order book shall have machine numbered pages and shall be carefully maintained and preserved by the Engineer in charge.

(i) Pre-construction anti-termite treatment shall be carried out in co-ordination with the building work and shall be executed in such a manner that the civil works are not hampered or delayed by the anti-termite treatment. The waterproof treatment shall be of type and specifications as given in the schedule of quantities. The treatment against water-proofing of basement, roofs, water retaining areas and termite infestation shall be and remain fully effective for a period of not less than 10 (Ten) years to be reckoned from the date of expiring of the Defect Liability period, prescribed in the contract. At any time during the said guarantee period if the client or his representative finds any defects in the said treatment or any evidence of re-infestation, dampness, leakage in any part of buildings or structure and notifies the contractor of the same, the contractor shall be liable to rectify the defect or give re-treatment and shall commence the work or such rectification or re-treatment within seven days from the date of issue of such letter to him. If the contractor fails to commence such work within the stipulated period, the client or his representative may get the same done by another agency at the Contractor's cost and risk and the decision of HLL for the cost payable by the contractor shall be final and binding upon him. Re-treatment if required shall be attended to and carried out by the Contractor within seven days of the notice from the client or his representative. Water proofing and anti-termite treatment shall be got done through approved / specialized agencies only with prior approval of the HLL or his representative. During the execution of work, if any damage shall

occur to the treatment already done, either due to rain or any other circumstances, the same shall be rectified and made good to the entire satisfaction of the HLL or his representative by the contractor at his costs and risks.

(j) Marine plywood or steel plates of minimum thickness as approved by Engineer in charge shall be used for formwork. The shuttering plates shall be cleaned and oiled after every repetition and shall be used. The number of repetitions allowed for plywood and steel shuttering shall be depending upon the condition of shuttering surface after each use and the decision of Engineer in charge in this regard shall be final and binding on the contractor. No claim whatsoever on this account shall be admissible.

(k) RECORDS OF CONSUMPTION OF CEMENT & STEEL - For the purpose of keeping a record of cement and steel received at site and consumed in works, the contractor shall maintain records in the form approved by the Engineer in charge, showing columns like quantity received and used in work and balance in hand etc. The contractor's representative and Engineer in charge's representative shall sign this register daily.

(l) The contractor shall prepare and finalize a 'Quality Assurance Programme' within 10 days from letter of acceptance. Engineer in charge shall also carryout quality audit and quality surveillance of systems and procedures of Contractor's quality control activities. The Quality Assurance Programme of Contractor shall generally cover the following:

- a) Procedure for selection and approval of material sources.
- b) Type, frequency, sampling and procedure of tests at site and laboratories.
- c) Work instruction for various stages of work.
- d) Formats for carrying out various tests.
- e) Checklist for Construction Practices.

(m) The instruction/ approvals given by the Engineer in charge to contractor shall hold good. In case instructions and approvals are given by HLL, the same shall supersede the instruction of Engineer in charge. In all cases decision of the Engineer in charge shall be final and binding on the contractor.

B) PLUMBING WORKS

1. Contractor should take proper care in cutting pipes and other materials issued by the owner to use at site of work so that wastage will be within permissible limit. In case the wastage in found more than permissible limit due to negligence omission carelessness from the contractor or any workers employed by him, necessary recovery will be effected from the contractor's bills.

2. The contractor shall execute the work in consultation with the site in charge and all other agencies and persons engaged at the site.
3. Concealed piping work shall be done in consultation with Engineer in charge before plastering work is done.
4. All work's involving cutting and breaking of walls and slabs etc. should be done before plastering work in done.
5. Contractor should take proper care in handling all kinds of fittings issued to him and if any breakage, shortage is found due to carelessness, omission negligence from the part of contractor on his employees or by theft the cost of fittings found broken, damaged or stolen will be recovered from the contractor.
6. All plumbing works shall be pressure tested for all kinds of leakage etc, before plastering work is done to the satisfaction of Engineer in charge.
7. Care shall be taken while making holes drilling cutting etc, to avoid damage to plumbing and electrical lines and other cables lines etc.
8. The contractor shall provide safety devices to all the persons working at dangerous position employed by him at the site.
9. The contractor shall obtain sanction from concerned authority for taking water connection from KWA main line.
10. The contractor shall obtain Consent to establish and Consent to operate from Kerala State Pollution Control Board. The treated waste water shall conform to the parameters specified by KPCB for reuse for Flushing.

C) ELECTRICAL WORKS

1. The sub-work of internal EI/ External EI/ SITC of Substation works/ SITC of Diesel Generator works etc. shall be carried out by the main contractor only through CPWD registered/ enlisted Contractor of appropriate Class.
2. If the main contractor fails to associate agency / agencies for execution of minor components of work within a reasonable time and furnish complete details or furnishes details of ineligible agencies even after the tenderer is given due opportunity, the entire scope of such component of works shall be withdrawn from the tender and the same shall be got executed by HLL at the risk and cost of the main contractor.
3. The materials shall be procured only from the manufacturers and their authorized dealers and documentary proof for such procurement and supply shall be produced by the contractor.
4. The department reserves the right to send such materials to the manufacturers/authorized test laboratory to verify the genuineness and quality of the product.
5. The contractor is advised to visit the site before quoting for this tender to apprise himself about the site environments and other conditions. Drawings and specifications are enclosed with the tender which shall be scruplessly followed in the execution.

6. The work shall be progressed in tune with the civil work. As such, the contractor/agency engaged for electrical works shall work in close coordination with casting of the slabs, erection of the walls etc. as reqd. No. claim of the contractor shall be entertained by the department for the idle labour.
7. The conduit shall be laid in the RCC slab before their concreting and in walls before plastering and in MS / Al. channels. The actual run of conduit and size of the boxes are to be marked on drawing by the contractor and got approved from the Engineer in charge before erection at site.
8. Earthing shall be done in the presence of the Engineer in charge or his authorized representatives.
9. The contractor shall be responsible for any damage caused to the building or electrical installations during the execution of the work. Damage, if any shall have to be made good by the contractor at his own cost failing which the same shall be got rectified and made good at the risk and cost of the contractor.
10. The work shall be carried out in engineering like manner of best practices and bad workmanship shall be rejected summarily. For redoing the job, no claim of the contractor shall be entertained.
11. The site shall be cleared of, malba, debris caused by working at site without any extra cost to HLL.
12. The contractor or his authorized representative shall sign the site order book and comply with the remarks entered therein by the representative of the HLL.
13. Wherever make of material is not mentioned the contractor shall quote clearly the make in his tender.
14. The contractor will ensure that all the skilled persons engaged / deployed for executing the electrical work possess the wireman license issued by approved authorities. Consequences arising due to the default of the contractor to comply with this condition would be contractor's responsibility only.
15. All the DB's switchgears shall have identification marking on them written in white paint. Nothing extra shall be paid on this account.
16. Earthing points with studs are to be provided on each of the switch boards /DB's.
17. All hardware, fastening material viz, nuts, bolts, washers and screw etc. to be used on work shall be of Zinc / cadmium plated or as per CPWD Specification.
18. All the material should be ISI marked wherever not specified, if ISI marked material is not available it should be conforming to BIS specification amended upto date, however, approved make of the materials only to be used in the work as per agreement.
19. The contractor shall have to furnish the insulation test report, earth report, along with all required details of electrical load on the prescribed proforma for the electric connection from KSEB or as desired by them.
20. The contractor shall submit the completion certificate and completion plan as per Clause 1.26 of General Specifications for Electrical Works Part-I, Internal 2013.

21. All concealed works and earthing shall have to be done in the presence of the Architect or his authorized representative.
22. The chases in walls shall be done by chase cutting machines, for which contractor shall arrange adequate numbers of chase cutting machines (Chase Cutters) for cutting chases in walls etc for laying of conduits.
23. The contractor will have to arrange for insulation and other tests as per rules in the presence of the Engineer in charge as and when required by him and submit the test report in triplicate before the work can be considered as complete.
24. The contractor shall be responsible for the safe custody of the electrical installation in the building, including fitting and fixtures till the installations are handed over to the department. He should make his own arrangement for proper watch and ward at his risk and cost. No claim will be entertained on this account.
25. The work is to be carried out in workman like manner and generally in accordance with the plans. However the contractor will be bound to carry out the work with minor deviation over the plan supplied if desired by the Engineer in charge of the work.
26. All chases holes recesses etc shall be done to the original finish by the contractor as required without any additional cost.
27. All the boxes for fixing accessories such as switches/ sockets regulators etc will be good quality and the size shall be got approved from the Engineer in charge or his authorized representative and the boxes shall be recessed in the wall.
28. All the junction boxes used should be covered in front with 3 mm thick Hylam sheet.
29. After completion of the work, the contractor shall remove all the dust and dirt and keep the building in a clean condition.
30. Rate should be inclusive of all taxes and duties as levied by Govt. from time to time.
31. All the wires above 1.5 Sq. mm must be terminated to the boards/MCB's etc. through suitable lugs by crimping for which no extra payment will be made.
32. Proper sleeving should be provided to the bare earth conductor in switch boxes and also to the bare conductor used for inter switch looping inside the switch boxes for which no extra payment will be made.
33. The contractor to lay conduits and switch boxes in the brick work before start of plastering by civil department. Also fish wire must be drawn in conduit works for which no extra payment will be made.
34. Loose wire inside the boxes, wherever required shall be provided along with MCBDB for which no extra payments shall be made to the contractor.
35. All metal boxes, boards, frames etc. are to be provided with anti rust primer before erection.
36. Work to be executed in accordance with Specifications, Drawings, and Orders etc.

The contractor shall execute the whole and every part of the work in the most substantial and workman like manner both as regards materials and otherwise in every respect in strict

accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design drawings and instruction given by the Engineer in charge. The contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works, and provide all labour and materials, tools and plants including for measurement and supervision of all works and structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these is specified or is reasonably inferred from the contract. The contractor shall take full responsibility for adequacy suitability and safety of all the works and methods of construction.

37. Measurement and Billing

The contract is for the completed work to be paid for according to the actual quantities at the rate agreed upon in the tender schedule of rates & probable quantities. All measurements shall be taken jointly by the HLL Engineer in charge or his authorized representative and authorized representative of the contractor from time to time during the progress of work and such measurements are recorded in the measurement book by the former and dated signature obtained from the latter in token of his acceptance. The contractor shall without extra charge provide all assistance with every appliance, labour and other things necessary for measurement.

The measurements shall be done in accordance with the procedure followed in Central PWD. A Engineer in charge shall check all the measurements recorded in the measurement books. The contractor has to obtain the quantities of items of work done from the consultant and prepare the bill based on the agreed rates. The bills shall be checked and duly certified by the Engineer in charge for making payment as per the terms of payment schedule.

38. The contractor shall bring the sample of all approved makes of the materials listed in the Tender to the Engineer in charge and shall use the material as per the sample approved by the Engineer in charge. Sample of approved materials must be kept at site for inspection/comparison with materials used in the work by senior officers. All materials shall be delivered with manufactures test certificates and technical catalogues, instructions manuals, wiring diagram etc. as required.

39. All HT works shall be executed as per IE rules, KSEB rules, KSEI rules and BIS.

40. Diesel Generator installation should be carried out in accordance with IE rules, CPCB -II rule, KSEB rules, KSEI rules and BIS.

41. Whatever be the make or specification given in the schedule or technical specification, the sample that is approved by the HLL Engineer in charge alone should be used. No extra cost on this account is payable.

D) HVAC WORKS

1. The air conditioning compressors offered multiple shall have COP more than 4.9.
2. Computer selection of the chillers has to be furnished by the original manufactures. Manipulated selections will be violation of tender.
3. Overall Chiller efficiency offered shall have COP > 4.9 for 150 TR Chiller.
4. Power consumption details shall be furnished conforming to ARI-2000- 550-598 but however the following data may be followed.
Condenser water inlet and outlet temperatures = 90 o F, 97.5 o F
Chilled water inlet and outlet temperatures = 55 o F, 45 o F
Chiller fouling factor = 0.00025/0.0001
5. The above power consumption shall be tested and test certificate shall be furnished
6. The work shall be carried out strictly in accordance with the time schedule and other instructions given by the owner taking care to cause minimum amount of noise and other nuisance at the site.
7. Security of all materials stored at site shall be the sole responsibility of the bidder.
8. All items shall be by OEMs only and no labeled products quoted will be accepted. The OEMs should have a service setup in south India as well.
9. All pumps / motor need to be high energy efficient and have an efficiency of 80% or above.
10. All AHUs will be given only one power input cable. Any looping should be done by OEM in case of multiple motors in one AHU
11. All mandatory and statute sanction orders and approvals from the electrical inspectorate and KSEB shall be obtained by the contractor before energizing the system.
12. All ceiling suspended AHUs to have access door.

(E) FIRE PROTECTION WORKS

1. The installation of Fire hydrant, Fire Sprinkler and Detection system shall conform to norms as per National Building Code 2005- Part IV
2. The Contractor shall prepare shop drawings, material submittals and get the same approved by the Engineer in charge before execution of works.
3. The contractor shall obtain initial and final NOC for the Fire fighting system from local authorities like State Fire Department and liaison work with department.
4. The Contractor shall obtain statutory approval for energizing electrical items included in the tender from the electrical inspectorate.
5. The Contractor shall commission the system after erection and testing of the works. This may be done in the presence of authorized Fire authority personnel.

ADDITIONAL CONDITIONS

A. GENERAL AND CIVIL WORKS

1. Unless otherwise provided in the Schedule of quantities the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing extra shall be payable to him on this account.
2. Other agencies doing work related with this project will also simultaneously execute the works and the contractor shall afford necessary facilities for the same. The contractor shall leave such necessary holes, openings etc. for laying, burying in the work pipes, cables, conduits, clamps, boxes and hooks for fan clamps, etc. as may be required for other agencies conduits for Electrical wiring/cables will be laid in a way that they leave enough space for concreting and do not adversely affect the structural members. Nothing extra over the agreement rates shall be paid for the same.
3. The contractor shall be bound to follow all restrictions/instructions with regard to safety/security and nothing extra shall be payable on this account.
4. (a) The Construction works will be carried out in the manner complying in all respects with the requirements of relevant byelaws of the local body under the jurisdiction of which the work is to be executed or as directed by Engineer in charge and nothing extra will be paid on this account.
(b) The contractor shall comply with proper and legal orders and directions of the Local or Public authority or Municipality and abide by their rules and regulations and pay all fees and charges, which he may be liable.
5. Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been built in the items and nothing extra shall be payable (or) extra cement considered in consumption on this account.
6. All drawings issued for the work shall at all times be properly co-related before executing any item of work.

Samples of various materials required for testing shall be provided free of charge by the contractor. Testing charges shall be borne by the department. However, if material does not conform to the relevant codes/specifications, the testing charges shall be borne by the contractor. All other expenditure required to be incurred for taking the samples, conveyance, packing etc. shall be borne by the contractor himself.

7. All drawings issued for the work shall at all times be properly co-related before executing any item of work.

8. For the purpose of recording measurements and preparing running account bills, the abbreviated nomenclatures indicated in the publications "Abbreviated nomenclature of item of DSR-2014" with up to date correction slips shall be accepted. The abbreviated nomenclature shall be taken to cover all the materials and operations as per the complete nomenclature of the relevant items in the agreement and other relevant specifications.

(b) In the case of items for which abbreviated nomenclature is not available in the above cited publication and also in case of extra and substituted items of works for which abbreviated nomenclature is not provided in the agreement, the full nomenclature of the items shall be reproduced in the measurement books and bill forms for running account bill.

The full nomenclature of the items shall be adopted in preparing abstract of final bill form in the measurement book and also in the bill form for final bill.

9 The following procedure shall be followed in case of removal of rejected/sub-standard materials from the site of work.

Whenever any material brought by the contractor to the site of work is rejected, entry thereof should invariably be made in the site order book under the signature of the Project Manager giving approximate quantity of such materials. As soon as the material is removed, a certificate to that effect may be recorded by the Engineer in charge against the original entry, giving the date of removal and mode of removal i.e. whether by truck, carts or by manual labour. If removal is by truck, the registration number of the truck should be recorded.

10. Conditions for Cement (Grey Cement)

i) The contractor shall procure 43 grade ordinary Portland Cement/ Portland Pozzolana Cement (PPC) as required in the work, from reputed manufacturers of cement such as ACC, Ultra tech, Vikram, Shree Cement, Ambuja, Jaypee Cement, Century Cement, J. K. Cement India Cement, Malabar Cement **or from any other reputed cement Manufacturer having a production capacity not less than one million tonnes per annum as approved by HLL Engineer in charge.**

The contractors may also submit a list of names of cement manufacturers which they propose to use in the works whose name shall be got approved from the HLL Engineer in charge. Supply of cement shall be taken in 50 Kg. bags bearing manufacturer's name and IS I marking. Samples of cement arranged by the contractor shall be taken by the Engineer-in-

charge and got tested in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by the contractor does not conform to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer in charge to do so.

- ii) PPC (Portland Pozzolana Cement) if used in RCC structures is to be regulated in accordance with the circular issued by the Directorate General of Works CPWD vide No.CDO/SE(RR)/Fly Ash (Main)/102 dt.09.04.2009.
- iii) If necessitated due to low water/binder ratio, required workability shall be achieved by use of chloride free chemical admixtures conforming to IS:9103. The compatibility of chemical admixtures and super plasticizers with each set OPC, fly ash and /or PPC received from different sources shall be ensured by trials.
- iv) The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer in charge.
- v) The cement godown of the capacity to store a minimum of 2000 bags of cement shall be constructed by the contractor at the site of work for which no extra payment shall be made. Double lock provision shall be made to the door of the cement godown. The keys of one lock shall remain with the Engineer in charge or his authorized representative and the keys of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer in charge at any time.
- vi) The cement shall be got tested by Engineer in charge and shall be used on work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing. The cost of tests shall be borne by the contractor.
- vii) Damaged cement shall be removed from site immediately by the contractor on receipt of notice in writing from the Engineer in charge. If he does not do so within three days of receipt of such notice, the Engineer in charge shall get it removed at the cost of the contractor.
- viii) The actual issue and consumption of cement on work shall be regulated and proper accounts maintained. The theoretical consumption of Cement shall be worked out and regulated as per procedure laid out else where in the contract.
- ix) The cement brought to site and the cement remaining unused after completion of the work shall not be removed from the site without the written permission of the Engineer in charge.

- (x) Cement should be kept in godowns properly and register should be maintained to record receipts as well as consumption

11. Conditions for Steel

The steel reinforcement shall be issued by HLL.

- i) The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent distortion and corrosion and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.
- ii) For checking nominal mass, tensile strength, bend test, re-bend test etc. specimen of sufficient length shall be cut from each size of the bar at random at frequency not less than that specified below:

Size of bar	For consignment below 100 tonnes	For consignment above 100 tonnes
Under 10 mm dia. bars	One sample for each 25 tonnes or part thereof	One sample for each 40 tonnes or part thereof
10 mm to 16mm dia bars	One sample for each 35 tonnes or part thereof	One sample for each 45 tonnes or part thereof
Over 16mm dia bars	One sample for each 45 tonnes or part thereof	One sample for each 50 tonnes or part thereof

- iii) The cost of tests shall be borne by the contractor.

- iv). The actual issue and consumption of steel on the work shall be regulated and proper accounts maintained. The theoretical consumption of steel shall be worked out as per procedure laid out elsewhere in the contract.

B. ELECTRICAL AND HVAC WORKS.

1. Internal EI/External EI/SITC of Substation works/SITC of Diesel Generator works etc. shall be carried out by the main contractor only through CPWD registered / enlisted Contractor of appropriate Class.
2. Materials/Equipments shall be procured only from approved manufacturers or their authorized dealers and documentary proof for such procurement and supply shall be produced by the contractor.

3. HLL reserves the right to get the materials tested to verify the genuineness/ quality of the product as per the terms provided elsewhere in the contract.
4. The contractor is advised to visit the site before quoting to apprise himself about the site environments and other conditions. Drawings and specifications enclosed with the tender shall be scruplessly followed.
5. Electrical works shall be progressed in coordination with the civil works. The agency for electrical works shall work in close coordination with casting of the slabs, erection of the walls etc. as reqd. No claim of the contractor shall be entertained by the department for the idle labour.
6. Conduits shall be laid in the RCC slab before concreting and in walls before plastering. The actual run of conduit and size of the boxes are to be marked on the drawings by the contractor and got approved from the Engineer in charge before erection at site.
7. Earthing shall be done in the presence of the Engineer in charge or his authorized representatives.
8. The contractor shall be responsible for any damage caused to the building or electrical installations during the execution of the work. Damage, if any shall have to be made good by the contractor at his own cost failing which the same shall be got rectified and made good at the risk and cost of the contractor.
9. Works shall be carried out in an engineering like manner of best practices. Bad workmanship shall be rejected summarily. For redoing the job, no claim of the contractor shall be entertained.
10. The site shall be cleared of malba, debris etc caused by working at site without any extra cost to HLL.
11. The contractor or his authorized representative shall sign the Site order book and comply with the remarks entered therein by the representative of the Engineer in charge.
12. The contractor will ensure that all the skilled persons engaged / deployed for executing the electrical work possess appropriate license issued by approved authorities. Consequences arising due to the default of the contractor to comply with this condition would be contractor's responsibility only.
13. All the DBs, switchgears etc. shall have identification marking on them written in white paint. Nothing extra shall be paid on this account.
14. Earthing points with studs are to be provided on each of the switch boards /DBs.
15. All hardware, fastening material viz, nuts, bolts, washers screw etc. to be used on work shall be of Zinc / cadmium plated or as per CPWD Specifications.
16. The contractor shall have to furnish the insulation test report, earth report, along with all required details of electrical load on the prescribed pro forma for the electric connection from KSEB.
17. The contractor shall submit the completion certificate and completion plan as per Clause 1.26 of General Specifications for Electrical Works (Part-I, Internal) 2013.

18. All concealed works and earthing shall have to be done in the presence of the Engineer in charge or his authorized representative.
19. The chases in walls shall be done by chase cutting machines, for which contractor shall arrange adequate numbers of chase cutting machines (Chase Cutters).
20. The contractor will have to arrange for insulation and other tests as per rules in the presence of the Engineer in charge as and when required and submit the test report in triplicate before the work can be considered as completed.
21. The contractor shall be responsible for the safe custody of the electrical installation in the building, including fittings and fixtures till the installations are handed over HLL. He should make his own arrangement for proper watch and ward at his risk and cost. No claim will be entertained on this account.
22. The work is to be carried out in workman like manner and generally in accordance with the plans.
23. All chases/ holes/ recesses etc shall be finished to the original finish by the contractor as required without any additional cost.
24. All the boxes for fixing accessories such as switches / sockets regulators etc will be as per approved samples and the sizes shall be got approved from the Engineer in charge or his authorized representative. The boxes shall be recessed in the walls.
25. All the junction boxes used should be covered in front with 3 mm thick Hylam sheet.
26. All the wires above 1.5 Sq. mm must be terminated to the boards/MCBs etc. through suitable lugs by crimping for which no extra payment will be made.
27. Proper sleeving should be provided to the bare earth conductor in switch boxes and also to the bare conductor used for inter switch looping inside the switch boxes for which no extra payment will be made.
28. The contractor to lay conduits and switch boxes in the brick work before start of plastering. Also fish wire must be drawn in conduit works for which no extra payment will be made.
29. Loose wire inside the boxes, wherever required shall be provided along with MCBDB for which no extra payments shall be made.
30. All metal boxes, boards, frames etc. are to be provided with anti rust primer before erection.
31. All HT works shall be executed as per IE rules, KSEB rules, KSEI rules and BIS codes
32. Diesel Generator installation should be carried out in accordance with IE rules, CPCB -II rule, KSEB rules, KSEI rules and BIS codes.
33. MODE OF MEASUREMENT FOR HVAC WORKS

The following system of measurement shall be followed in respect of items given below.

Sheet Metal Work

a. Ducting:

- i. All sheet metal ducting work will be measured in terms of final sheet area installed in SQ. METERS.
- ii. No measurement of vanes, splitters, duct dampers, deflectors, access doors, etc. which are required to be installed in the ductwork shall form part of the ductwork.
- iii. Duct fittings such as bends, elbows, tap-offs, collars, transformation pieces etc. shall be treated as ordinary duct pieces with their length measured along their centerline.
- iv. No duct supports, stiffening, members, etc. shall be measured separately. All such supports/ hangers shall form part of ductwork.
- v. Equipment connections such as canvas/asbestos/Rexene shall be deemed to be part of the ductwork and no separate measurement will be allowed.

b) Grilles:

All grilles will be measured in terms of effective area (e.g. 600mm x 150mm grille will be measured as 0.09 Sq. Meter

c) Diffusers:

Diffusers will be measured in terms of diameter of each diffuser in centimeters.

d) Dampers

- i) All duct dampers shall form part of ductwork; no separate measurement will be made for duct dampers.
- ii) Fire dampers will be measured in terms of effective area in Sq. metre.

e) Insulation

1) Ducting Insulation

- i) Ducting insulation will be measured on the basis of duct area and not based on insulation thickness.
Example: Measurement 25 mm thick insulation on 600 mm x 300 mm duct 1 metre length. $[0.600 + 0.300] \times 2 \times 1 \text{ metre} = 1.800 \text{ Sqm.}$
- ii) No special measurement shall be made for insulation of bends, transformation pieces, tap offs, elbows etc. All such insulation shall be treated as standard duct insulation.
- iii) Insulation item shall include all accessories and finishes as specified. No separate measurement will be made for such items.

2) Piping Insulation

- i) Piping insulation shall be measured in linear lengths for each size of pipe.
Example: 50mm dia. pipe insulation (25 mm thick) - 6 meters.
- ii) No separate measurement of insulation shall be made for fittings such as bends, elbows, reducers, expanders, tees, crosses, flanges, etc. All such insulation shall be linear in metres measured along the centerline of piping.
- iii) All accessories and finishes connected with insulation work shall be deemed to form part of insulation and no separate measurement will be made for such items.
- iv) Insulation of valves will be measured as a unit for a particular size of valve.

Example: 50 mm dia. valve insulation (25 mm thick) - 1 No. 3) Equipment Insulation

No measurement for insulation of any equipment will be made. Insulation of equipment shall be deemed to form part of the equipment.

34. SHOP DRAWINGS

Before proceeding with the work, the contractor shall submit for approval the general layout and assembly drawings and such additional assembly and sub assembly detail drawings as are necessary to demonstrate fully that all parts of the apparatus to be furnished will conform to the specifications. Soon after the acceptance of the tender the contractor shall furnish six prints of layout, assembly and erection drawings for approval. If any modification is proposed by the owner/his assignee, six further prints of the modified drawings shall be submitted. No modification shall be made in a drawing after it has been approved by the owner/his assignee without prior consent. All drawings necessary for assembly erection, maintenance, repair and operation of the equipment shall be furnished. Different parts shall be suitably numbered for identification and ordering of spare parts. Approval of the owner of the drawings will not relieve the contractor of any part of his obligations to meet all the requirements of the correctness of his drawings. The contractor shall be responsible for and will pay for all alterations of the works due to discrepancies or omission in the tender and other particulars supplied by him whether such drawings have been approved by the owner/his assignee or not. After approval of the drawings the contractor shall furnish a set of tracing of the contractor drawings. Six copies of the approved drawings and manuals shall be submitted for use by the owner /his assignee before and during erection. Subsequently operation and maintenance of the plant shall also be furnished after approval of the contractor drawings. The contractor shall furnish and install in the machine room a neatly typed set of operating instructions securely framed and glazed. The contractor shall also supply one set of tools free of cost required for routing and special maintenance work. The contractor shall submit 2 sets of representations as "as is built drawings" and also in floppies for owners record.

A) ISSUE OF DRAWINGS:

Construction drawings will be issued to the Contractor progressively during the contract period and the Contractor shall arrange for the execution of the works and the procurement of materials accordingly. The Contractor shall give adequate notice in writing to the Engineer in charge or his representative of any further drawings or specifications that may be required for the execution of the works or otherwise under the contract.

B) RATES QUOTED FOR FINISHED WORK:

The rates quoted in the tender by the Contractor must be for the finished work as per the drawings and specifications.