

SECTION 2 - GENERAL SPECIFICATION

SPECIFICATION OF WORKMANSHIP AND MATERIALS REQUIRED FOR THE SUPPLY AND INSTALLATION OF LIFT SYSTEM

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SECTION 2 - GENERAL SPECIFICATION

SPECIFICATION OF WORKMANSHIP AND MATERIALS REQUIRED FOR THE SUPPLY AND INSTALLATION OF ELECTRICAL LIFT SYSTEM

2.1 EXTENT OF CONTRACT

The work covered by this specification is for the supply of all materials, appliances, labour, and necessary incidentals for the complete installation, testing and commissioning of Lift System as described further in the Specification. This Lift System must be complete in all aspect when handed over to the Jabatan Kerja Raya, and must be in strict accordance to this specification.

2.2 CONDITIONS OF CONTRACT

Tenderers shall read in conjunction with the specification in the following Forms:-

(a) Form PWD 203 - Rev. 1/2010

The conditions and terms stated in these Forms constitute part of this Specification. Copies of these Forms are available for inspection at the Ibu Pejabat JKR, Jalan Sultan Salahuddin, Kuala Lumpur during normal office hours.

2.3 TENDERS

Tenders for the above-mentioned shall be submitted on a lump sum basis for the supply, installation, testing and commissioning of the complete plant as described further in this Specification, and the tender price shall include all charges for transport, handling, Government Custom Duties, Sales Tax and any other taxes where applicable, and all charges for the servicing and maintenance of the complete plant during the warranty period.

It is to be clearly understood that the successful tenderer shall pay all Government Custom Duties and any other taxes which may be payable on all materials for use in work to be performed under this Specification, and no tax exemption certificates will be supplied by the Jabatan Kerja Raya.

2.4 INSTRUCTION TO TENDERERS

The work to be tendered under this Specification includes the supply, delivery of all materials, appliances, labour and necessary incidentals for the complete installation, testing, painting, commissioning, operation and maintenance of the mechanical systems specified.

The tenderer shall tender strictly on the basis of the conditions and terms as laid out in the Form PWD 203 Rev 1/2010. Jabatan Kerja Raya will not entertain any qualifications to the terms or any other conditions imposed by the tenderer.

Tenders must be made on the Form of Tender (JKR 203C Rev.5/2008), along with all relevant blanks in the Schedule of Technical Data for Equipment Offered, Schedule of Rates, Summary of Prices and all other Schedules annexed to this Specification duly filled up. Any tender which is incomplete or which does not include the whole of the works covered by this Specification will not be considered.

All drawings and Specifications must be returned together with the tender to the office of Jabatan Kerja Raya at the time of tendering. Failure to observe this condition may result in the disqualification of the tender and forfeiture of the tender deposit.

The tenderer must be specific when completing the Schedule of Technical Data for Equipment Offered and shall only mention one make/manufacturer for each item offered by him. Phrases



like "AS SPECIFIED" and "OR APPROVED EQUIVALENT" shall be deemed void.

The tender price entered into the Form of Tender shall be on a lump sum basis and shall include all charges for transport, handling, government custom duties, sales tax and other taxes, where applicable and all charges for servicing and maintenance of the complete installation during the guarantee period. No tax exemption certificates will be supplied by the Jabatan Kerja Raya.

The Government shall not be bound to accept the lowest or any tender.

If the tenderer has any doubt as to the meaning of any portion of this Specification or Drawing(s), he shall, when submitting his tender, set out in a letter the interpretation on which he relies.

It shall be noted that where in this Specification, a manufacturer's name and material or equipment catalogue number is quoted followed by the phrase "or other approved equivalent" such reference is intended as a guide to the type of construction, performance, general appearance and quality standard of manufacture and shall in no way, exclude the offer of suitable alternative of similar standard and characteristics. The latter shall have to be approved by the Superintending Officer.

Should the tenderer consider there be any advantage to the Jabatan Kerja Raya by modification to the Specification, he may draw attention to such by an attached document stating the reduction of amount of his tender, if accepted by the Jabatan Kerja Raya. However, the total sum to be entered in the Form of Tender shall be such that it represents complete compliance with the Specification.

Tenderers shall furnish together with his tender, such details, technical literature, manuals, etc., as specifically requested or otherwise and all information which is necessary for the complete assessment of the tender.

Tenders which do not comply fully with the requirements of this clause will not be considered.

Tenderers shall state clearly in the tender, the section of the works they wish to sub-let. In each instance, the names of the proposed Sub-Contractors and details of their capacity and experience in carrying out such work must be provided.

The tenderer is to state in his tender the time required for delivery of the equipment to site and the time required for completion of the entire installation, both relative to the date of notification of the acceptance of tender.

2.5 DRAWINGS

J.K.R. Drawings:

The drawings applicable to this installation are listed in the Schedule of Drawings and should be considered as diagrammatic and approximate only. The Specification and drawings are intended to be mutually explanatory and complete, but all work called for one, even if not by the other, shall be fully executed.

Tenderer's Drawings:

The tenderer shall submit together with his tender general dimensioned drawings showing all the major items of the equipment being offered so as to show the suitability of the equipment arrangement within the allocated space.



Working Drawings:

Before any work can be executed, dimensioned drawings of the plant, materials, service connections and other information required for work or services to be provided by others, shall be submitted in triplicate to the S.O. for approval. These drawings shall be submitted in ample time for resubmitted for approval. Approval of any drawings by the S.O. does not exonerate the Contractor from any responsibility under the contract terms and conditions.

Record Drawings and Particulars:

The Contractor shall maintain on site a complete set of the approved drawings which shall be updated progressively to show accurately the works as executed to-date.

After completion of the installation work, and at least 3 weeks prior to the Schedule Date of Practical Completion, the as-installed drawings shall be brought to completion and two sets of prints provided to the S.O. for comment and approval. Within one week of receiving the S.O.'s comments and requirements, the Contractor shall make all necessary amendments and resubmit one set of prints to the S.O. for final approval.

The Contractor shall furnish to the S.O. a complete set of reproducible transparent prints, three sets of bound ordinary prints and softcopy in CDs of the installed Drawings.

2.6 APPOINTMENT OF PROFESSIONAL ENGINEER

The Contractor shall appoint registered professional mechanical engineer to provide detailed calculations and endorse drawings for submission to relevant authority. Any structural drawing and structural work to be carried out shall be endorsed by the registered professional civil engineer while electrical drawing / work by the registered professional electrical engineer.

2.7 REGULATIONS

All work to be performed under this Contract shall be in accordance with the best commercial practice, and shall comply with the regulations and by laws of the following authorities.

- (a) Jabatan Kerja Raya
- (b) Jabatan Keselamatan dan Kesihatan Pekerjaan
- (c) Suruhanjaya Tenaga
- (d) Jabatan Perkhidmatan Bomba dan Penyelamat
- (e) All other authorities having jurisdiction over the whole or part of the mechanical installation in the locality.

The Contractor shall obtain and fill in all notices when required by the above-mentioned authorities, and shall obtain all consents necessary for the various works to be executed by him and shall pay all fees in connection therewith.

The Contractor shall draw to the attention of the Superintending Officer anything mentioned in this Specification which is inconsistent with the regulations of the above authorities and obtain further instructions from him before proceeding with any work

2.8 RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall be responsible for:-

- (a) Ascertaining all particulars relating to his work in respect of sizes and positions in which chases, holes, mortices and similar items are required for the execution of the work.



- (b) Unloading, getting in, storing and all handling and hoisting of his materials, plant and tools into required positions.
- (c) Providing all necessary watching and lighting and making available temporary water and electrical power supplies for the execution of the work, supplying and running distribution pipes, hoses, cables, leads and electrical gear etc., required including paying for water and electrical power consumed.
- (d) The provision of all fuel, gas, steam and other services required including water and electrical power that may be required for the test running, testing and balancing and commissioning of installations.
- (e) The provision, erection, maintenance and removal of all his temporary office, workshop and workmen's accommodation including paying all assessment and other charges.
- (f) The provision of any special scaffolding, staging etc., required for the execution of the work.
- (g) Preparing all necessary dimensions and taking responsibility for their accuracy.
- (h) Covering and protecting and taking full responsibility for any loss or damage to his plant, tools, equipment and other property not for use or incorporation in the work.
- (i) Clearing away and removing all rubbish and debris.

2.9 SCHEDULE OF WORK

The Contractor shall prepare in collaboration and to the approval of the Jabatan Kerja Raya a detailed Schedule of Work based on the time requirements of the Contract schedule. This schedule of work shall indicate clearly the sequence of operation required to complete the works of the Sub-Contract, and also the commencement and completion dates of each section of the work. The detailed schedule of work shall comprise but not limited to the works as listed in **Appendix A**.

The Contractor shall ensure that his works progress according to this schedule of work, there shall be complete cooperation with all other trades in the matters of planning and execution of work.

The schedule of work shall be produced using MS Project or Primavera or other equivalent project management tool. It shall be able to generate but not limited to the following information such as critical path method (CPM), work breakdown structure (WBS) including the manpower and cost for each work, S-curve, work progress and comparison between schedule and actual progress (ahead/delay in terms of percentage and day) on desired date, etc. as requested by S.O.

Further variations of the schedule made with the agreement of S.O. shall not relieve the Contractor of his liability to complete the contract and/or stages of work at the then agreed times.

2.10 WORKMANSHIP

The work described in this Specification shall be performed by workmen skilled in the installation, testing, commissioning and servicing of the aforesaid plant. All necessary work shall be executed in good workmanlike manner so as to present a neat and finished appearance.

The Jabatan Kerja Raya shall decide whether or not the finished piece of work is satisfactory,



and if in its opinion any material or equipment has not been properly installed or finished, the successful tenderer, must replace the material or equipment wherever required, and must re-install the material or equipment in a manner entirely satisfactory and without additional cost to the Jabatan Kerja Raya.

2.11 OBVIOUS WORK

The Contractor shall provide all materials and necessary fittings and perform any work which is obviously necessary for the proper and efficient functioning of the complete installation even though such material or work may not be explicitly mentioned in the Specification.

2.12 MATERIALS

The Contractor shall supply and deliver to site all necessary fittings, equipment, materials, tools, plant and hoist to complete the installation apart from those specifically mentioned to be supplied by others.

All materials and equipment to be supplied under this Specification shall be new and unused and shall generally be of the best quality as regards design, manufacture and performance.

2.13 SITE MEETINGS

Site meeting will be held as arranged by the Superintending Officer and the Contractor shall nominate a senior representative to attend these meetings to coordinate and check works in progress.

2.14 ACCESS TO SITE

The Contractor shall be allowed to access the building during normal working hours. At times other than these, he must make his own arrangements with the client or S.O. representatives and he shall be held responsible for the building and its contents at all times.

2.15 SUPERVISION

The Contractor shall have in his direct employ at all time a skilled and efficient supervisor who is empowered to receive and carry out instructions. This supervisor must be thoroughly competent in supervising the works and shall be to the approval of the S.O.

2.16 OPERATING INSTRUCTIONS AND TUITION

After completing the installation and before handing it over to the Jabatan Kerja Raya, the Contractor shall arrange to instruct, free of charge, one or more Jabatan Kerja Raya operators, in all aspects of correct operation and fault finding in case of breakdown during normal operation.

In conjunction with the above tuition, the Contractor shall supply in triplicate printed sets of operating instructions which shall clearly indicate the sequence of operation for starting and stopping the entire plant and shall include the precautions to be taken. The operating instructions shall be complete with an "As completed wiring diagram and a schematic layout of the operating instructions" shall be supplied permanently mounted in a glazed frame to be hung up on to the plant room wall adjacent to the electrical switchboard.

2.17 REPAIR MANUALS AND SPARE PARTS

The Contractor shall supply in triplicate complete sets of repair manuals and spare parts books for all the equipment comprising the complete installation installed by him.



In addition, the Contractor shall submit in triplicate, within one month of notification, a detailed and itemized list of equipment and spare parts which the manufacturer/s of the supplied equipment consider as essential to be kept in ready stock for the purpose of yearly service and maintenance. Each item shall be priced in the original contract submission.

2.18 TOOLS

The Contractor shall supply a complete set of tools and appliances contained in approved package. The set is to be adequate for the maintenance of the aforesaid plant.

2.19 TESTING AND COMMISSIONING

On completing the installation work for the complete mechanical system, the Contractor shall carry out tests on all individual sections of the system to prove that the individual performance specified for all equipment can be produced and maintained. He shall also carry out tests on the plant as a whole to prove that the equipment has been properly adjusted and calibrated to produce the required guaranteed performance as called for according to Specifications of this tender.

The Contractor shall notify the Jabatan Kerja Raya when these tests are to be conducted so that a Jabatan Kerja Raya representative may be present to see that the tests are carried out satisfactorily.

Further adjustments to the controls shall also be made whilst the building is occupied and the installation is in use during the defects liability period. No additional cost shall be charged in carrying out these adjustments.

2.20 MAINTENANCE AND GUARANTEE

The maintenance and guarantee period shall be **twelve (12) months** from the date of handing over the completed installation to the Jabatan Kerja Raya. This guarantee shall include those provided by the manufacturer of the equipment installed and all materials and workmanship supplied by the Contractor.

During this period, the Contractor shall at his own expense, remedy and supply/replace all defective parts or items, inclusive of all consumable items so that the complete mechanical system is maintained in a first class running order. This maintenance shall include regular and systematic checking, cleaning and necessary adjustments to the equipment.

The Contractor shall also provide adjustments to the service as required by the Jabatan Kerja Raya in the event of a breakdown of the plant.

Replacement made during the maintenance and guarantee period may, at the discretion of the Superintending Officer be subjected to a similar maintenance and guarantee period from the date of replacement.

2.21 SERVICE CONTRACT

An annual figure is to be quoted where indicated hereunder for the complete maintenance (inclusive of repairs, replacements and the supply and installation of all consumable items) and service of the installation. Such annual figure will be valid and not subject to variation for a period of three (3) years from the end of the guarantee period.

This sum is **NOT** to be included in the total lump sum tendered for the project but is to be a separate quotation open for acceptance by the Jabatan Kerja Raya if they so desire.

The tenderer should note that the total maintenance costs for three years calculated on the



basis of the figure quoted hereunder will be taken into account when considering tenders.

2.22 PROPRIETARY NAMES AND ALTERNATIVE OFFERS

Whenever proprietary names are mentioned in this Specification or in the Drawings they are indicative of the type and quality only. Articles of alternative manufacture may be considered provided they are equal in all respects as regards design, quality, appearance and finish.

Any alternative offer which differs from that specified in this Specification must be clearly stated and described by the tenderer in Section 7 in this Specification.

2.23 SCHEDULE OF PRICES

The tenderer shall complete the Schedule of Prices as set out in Section 8 attached. All prices quoted shall be inclusive of Government Custom Import Duty and Government Surtax at current rate.

2.24 SCHEDULE OF RATES

The tenderer shall complete the Schedule of Rates as set out in Section 9 attached. The price quoted shall include cost of materials, cutting, fixing in position, labour, supervision, profit and everything else necessary for the completion of the installations.

----- **END OF SECTION 2** -----