
STANDARD ELECTRICAL SPECIFICATIONS

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GENERAL NOTES:

1. These schedules of quantities (hereinafter referred to as "Schedules") contain pages numbered consecutively. Before the Tenderer submits his Tender he shall check the number of pages, and if any are found missing or duplicated, or the figures or writing indistinct, or the Schedules contain any obvious errors, he should apply to the Engineer at once and have same rectified, as no liability whatsoever will be admitted by the Engineer in respect of errors in Tender due to incomplete documentation.
2. The Schedules form part of and must be read in conjunction with the Specification and drawings which document contains the full descriptions of the work to be done and material and equipment to be used and unless otherwise described in the Schedules, reference should be made to the Specification and drawings for the full meaning of descriptions of work to be done and materials and equipment to be used in the Works.
3. The Tender Amount to be submitted for consideration, shall be based on the total value of the Works as described in all sections of these Schedules. The Tenderer shall therefore duly complete the Schedules and submit same together with this Tender.
4. The unit prices and tariffs shall be accepted as correct, unless obvious discrepancies exist. The Engineer therefore reserves the right to adjust the Tender Amount in the event that the Tenderer made arithmetical errors in calculating the Tender Amount.
5. No alteration, erasure or addition shall be made to the text of the Schedules, unless the Engineer requested such alteration, erasure or addition in writing. Should any alteration, erasure or addition be made without the Engineer's consent, it will not be recognised and the original wording of the Schedules will be considered to apply.
6. The priced Schedules will be checked and the Engineer reserves the right to call for adjustments to any individual price or the rectification of any discrepancy, whilst the Tender Amount, as submitted or as adjusted after the correction of any arithmetical errors, remains unaltered.
7. The successful Tenderer and the Employer may agree that the total of any Schedule, including any variations by way of additions thereto or deductions therefrom, represents a fair and accurate quantification of the items set out in the Schedules and the parties may agree final payment on that basis.
8. Any variations required in order that the Works shall meet with the requirements of the Employer, shall be allowed within the scope of the Specification. Such variations shall be measured and the cost thereof shall be determined in accordance with unit prices in the priced Schedules, provided that such unit prices are available.
 - i. Any items or variations for which unit prices are not available in the priced Schedules, will be regarded as daywork items to be costed in accordance with the Conditions of Contract. The conditions for determining the extent and pricing of dayworks items, shall be the conditions allowed for in the Conditions of Contract.
 - ii. The cost of any variations to the design, which were called for prior to the execution of such work, shall be determined as described above. The cost for variations to work already completed, need not necessarily be determined as described above. Such variations shall be treated on their merits.
9. Unless a separate rate for the supply and for the installation of any item is specifically called for, the supply and installation costs for each item shall be fully included in the unit rate.

- i. The description "supply" for each item shall, unless otherwise stated herein, be held to include making, conveying and delivering, unloading, storing, insuring, profit and all other obligations arising out of the Conditions of Contract, but shall exclude Value Added Tax.
 - ii. The description "install" for each item shall, unless otherwise stated herein, be held to include the labour for unpacking, hoisting, setting, fitting and fixing in position, terminating, stripping, connecting, cutting, waste, patterns, models and templates, plant, temporary works, return of packing material, testing, commissioning and all other obligations arising out of the Conditions of Contract and necessary to ensure completion of the Works, but shall exclude Value Added Tax.
10. All fittings and accessories always include the connections thereto. All light fittings shall be complete with lamps and tubes, unless otherwise stated in the Schedules.
11. All measurements are nett, unless otherwise stated, and Tenderers must allow in the rates for wastage.
12. The quantities and rates included for daywork shall form part of the Tender Amount, but Tenderers shall note that these items shall be regarded as provisional and will only be payable to the Contractor if and when a written variation order to this effect had been issued.
13. Tenderers shall price the Preliminary and General Costs under any or all of two groups, viz:
- i. A fixed amount.
 - ii. An amount varied in proportion to the final -Time for Completion as compared to the original Time for Completion in the Contract.
 - iii. The allocation of costs to these categories listed above must be realistic and the Contractor may be re-quired to justify the allocation of the costs. Attention is particularly drawn to the right reserved above to adjust and/or correct prices.
14. All provisional sums shall initially be deducted from the amount of the Contract Sum. The expenditure of any money from a provisional sum shall only occur with the approval of the Engineer. Official variation orders will be issued by the Engineer for such purposes. All items described as "Provisional" shall be remeasured if required to form part of the Works and shall be paid for according to the prices Tendered therefore in the Schedules.
15. All prices quoted in the Schedules shall be based on the particular types of equipment specified. Alternative or similar and equal equipment may be offered in an alternative Tender to the main Tender.
16. All rates and amounts shall exclude Value Added Tax, which shall be added at the end of the Schedules in the Summary of Sections and carried over to the FORM OF TENDER.
17. All queries relating to this tender to be forwarded to Element Consulting Engineers (Mr Wouter van der Toorn, Email: wvdtoorn@eceng.co.za, Cell no.: 083 293 4089)

TECHNICAL NOTES

The following shall be read in conjunction with the general notes, schedules, specification and drawings.

1 DISTRIBUTION BOARDS

- 1.1 PC Sum allowed for the procurement of DB's under instruction of the Engineer.
- 1.2 DB's to comply in full to the general and technical specifications.
- 1.3 Rate to allow for the installation, materials required and circuit connections of DB as per single line diagrams.

2 WIREWAYS

- 2.1 Cabletray - Rate shall include 90deg bends, t-pieces, 45 deg offsets, crossovers, splice kits, suspension/wall brackets, hangers, slotted angles, suspension rods, fixing material, wastage, hoisting equipment and sundries.
- 2.2 Trunking - Rate shall include splice kits, elbows, 4-way junctions, endcaps, brackets, suspension rods, purlin clips, PVC covers, fixing material, wastage, hoisting equipment and sundries.
- 2.3 Powerskirting - Rate shall include 90 deg bends, elbows, endcaps, clips, covers, fixing material, wastage and sundries.
- 2.4 Cabstrut, O-Line or similar and equal approved.
- 2.5 Cable and wire mesh tray duty rating shall be in accordance with the manufacturers specification.

3 LIGHTING

- 3.1 PC Sum allowed for the procurement of luminaires under instruction from the Engineer.
- 3.2 Rate shall include for installation of luminaire and lamps, hoisting equipment, fixing materials, wastage, cutting of downlighter holes where required, conduit, wiring, 5A unswitched socket outlets where applicable, termination and connection.
- 3.3 Lighting circuits shall be wired in 2.5 mm² unless otherwise shown.
- 3.4 EMG denotes emergency battery pack and control gear and requires an unswitched live conductor.

4 LIGHT SWITCHES

- 4.1 Rate shall include for conduit, outlet box, wiring, cradle, cover plate, termination and connection, fixing material, wastage and sundries.
- 4.2 Crabtree or similar and equal approved.

5 GENERAL SMALL POWER

- 5.1 Rate shall include for conduit, outlet box, wiring, cradle, cover plate, termination and connection, fixing material, wastage and sundries.
- 5.2 Crabtree or similar and equal approved.
- 5.3 SSO circuits < = 50m shall be wired in 2.5 mm². SSO circuits > 50m shall be wired in 4 mm².
- 5.4 Welding SSO circuits shall be wired in 4 mm² unless otherwise shown.
- 5.5 AC circuits shall be wired in 4 mm² unless otherwise shown.
- 5.6 Refer single line diagrams for detailed supply sizes.

6 AUXILIARY SERVICES WIREWAYS

- 6.1 Rate shall include for conduit, outlet box, cover plate, 1mm² draw wire, fixing material, wastage and sundries.
- 6.2 Outlets shall be linked to the nearest services shaft in the conduit size as specified.
- 6.3 Crabtree or similar and equal approved.