

Item No	Quantity	Rate	Amount
<p><u>SECTION 1</u></p> <p><u>BILL NO. 1</u></p> <p><u>PRELIMINARIES & GENERAL</u></p> <p><u>SECTION A: GENERAL CONDITIONS</u> <u>(INCLUDING PARTICULAR CONDITIONS)</u></p> <p><u>GENERAL PROVISIONS (Clause 1)</u></p>			
1	Item		
<p>Definitions (Sub-Clause 1.1)</p> <p><u>Appendix to Tender</u></p> <p>The Appendix to Tender shall be deemed to be completed as incorporated in "Section 2: Letter of Tender and Appendix to Tender" of this Contract.</p> <p><u>With reference to Sub-Clause 1.1.13 (Contract Price):</u></p> <p>The Contractor is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all Materials and/or Plant, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste, patterns, models and templates, plant, Temporary Works, Contractor's Equipment, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this Contract. Value Added Tax (VAT) is to be separately stated on the summary page of this Bill of Quantities.</p> <p>Prices for all Contractor's Equipment and Temporary Works shall in addition include for the supply, maintenance, operating cost and subsequent removal and making good as necessary.</p>			
<p>Carried Forward</p>			R
<p>Section No. 1 Bill No. 1 Preliminaries and General</p>			

<p style="text-align: right;">Brought Forward</p> <p>The Contractor shall make such allowance against each item as he may consider necessary. Where an item in the Bill of Quantities is not priced it shall be assumed that it is provided by the Contractor free of charge or included elsewhere.</p> <p>The items in this Bill of Quantities utilise abbreviated descriptions. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or Specification. However, should the full intent and meaning of any description not be clear, the Contractor shall, before submission of his Tender, call for a written directive from the Engineer, failing which it shall be assumed that the Contractor has allowed in his pricing for Materials, Plant and workmanship in terms of international best practice.</p> <p><u>With reference to Sub-clause 1.1.14 (Contractor):</u></p> <p>If the Contractor constitutes a joint venture, consortium or other unincorporated grouping of two or more persons then:</p> <p>(a) these persons are deemed to be jointly and severally liable to the Employer for the performance of this Contract,</p> <p>(b) these persons shall notify the Employer of their leader who has authority to bind the Contractor and each of these persons, and</p> <p>(c) the Contractor shall not alter its composition or legal status without the prior written consent of the Employer.</p> <p><u>With reference to Sub-Clause 1.1.30 (Drawings):</u></p> <p>The Drawings which form part of the Contract Agreement are as listed in the Bill of Quantities.</p> <p><u>With reference to Sub-Clause 1.1.76 (Specification):</u></p> <p>Specification also includes "Section B: Specification" of these preliminaries.</p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries and General</p>		R	

	Brought Forward		R
	<p>The Specification is a "general specification" and as such all clauses may not necessarily be relevant to the Works. Any clauses which may be relevant shall be strictly adhered to except as modified or supplemented in the trade bills in the Bill of Quantities. In the event of a conflict between any provision contained in the Specification on the one hand and any provision contained in the trade bills in the Bill of Quantities on the other hand, the relevant provision of the trade bills shall prevail.</p> <p>The specifications incorporated in these documents are for pricing purposes. The Engineer shall issue instructions as to the Specification to be used for construction.</p> <p><u>With reference to Sub-Clause 1.1.87 (Works):</u></p> <p>The scope of the work shall include the manufacturing, supply, installation testing and commissioning and operating and maintenance of Solar PV Power Plant of 1000 KWP Capacity at Durban Station. The solar plant shall be integrated with the existing electrical services.</p>		
2	<p>Interpretation (Sub-Clause 1.2)</p> <p><u>Current Edition of Documents and Legislation</u></p> <p>Documents and legislation referred to in these preliminaries shall mean the current edition thereof with all amendments thereto at the date of submission of the Tender unless otherwise stated.</p> <p>The word "deemed" shall be conclusive that something is fact, regardless of the objective truth.</p> <p><u>With reference to Sub-Clause 1.2 (c) and (d) (Interpretation)</u></p> <p>The words "accept, allow, appoint, approve, authorise, certify, decide, demand, designate, grant, inform, instruct, issue, list, notice, notify, object, record, reduce, refuse, request, state" and their derivatives also require such acts to be in writing.</p>	Item	
3	<p>Notices and Other Communications (Sub-Clause 1.3)</p>	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 Preliminaries and General</p>		

	Brought Forward		R	
4	Law and Language (Sub-Clause 1.4)	Item		
5	Priority of Documents (Sub-Clause 1.5)	Item		
	<u>Precedence</u>			
	<u>The General Conditions (including Particular Conditions) are amplified, amended, modified, corrected or supplemented in these preliminaries.</u>			
	Notwithstanding Sub-Clause 1.5, in the event of a conflict between any provision contained in these preliminaries on the one hand and any provision contained in the Contract on the other hand, the relevant provision of these preliminaries shall prevail.			
6	Contract Agreement (Sub-Clause 1.6)	Item		
	<u>Contract Agreement</u>			
	<u>The following documents shall be deemed to form part and be read and construed as part of the Contract Agreement:</u>			
	(a) the Letter of Tender,			
	(b) Appendix to Tender,			
	(c) the Conditions of Contract,			
	(d) the Specification,			
	(e) the Drawings as indicated elsewhere in these preliminaries, and			
	(f) the Bill of Quantities with annexures and any document referred to therein.			
	Neither Party shall be bound by any express, tacit or implied term, representation, warranty, promise or the like not recorded in this Contract. This Contract supercedes and replaces all prior commitments, undertakings or representations, whether oral or written, between the Parties.			
7	Assignment (Sub-Clause 1.7)	Item		
	Carried Forward		R	
	Section No. 1			
	Bill No. 1			
	Preliminaries and General			

Brought Forward		R
8	Care and Supply of Documents (Sub-Clause 1.8)	Item
<p><u>Signed Contract</u></p> <p><u>The original signed Contract shall be held by the Employer who shall allow the Engineer, the quantity surveyor and/or the Contractor to inspect such original documents at such reasonable times as may be required by such persons. The Employer shall at his expense, furnish the Contractor and the Engineer with one copy of the signed Contract.</u></p> <p><u>Number of copies of each of the Contractor's Documents</u></p> <p><u>The Contractor shall supply to the Engineer one copies of each of the Contractor's Documents.</u></p>		
9	Delayed Drawings or Instructions (Sub-Clause 1.9)	N/A
<p><u>Construction Documentation Incomplete</u></p> <p><u>The construction documentation for the Works is not complete and will only be completed during the progress of the Contract. The Contractor and the Engineer shall work together to identify the requirements for the provision of construction documentation. The Contractor and the Engineer shall agree the dates that are reasonable by when the Contractor is to be provided with further Drawings and any other item of the anticipated construction documentation.</u></p>		
10	Employer's Use of Contractor's Documents (Sub-Clause 1.10)	Item
11	Contractor's Use of Employer's Documents (Sub-Clause 1.11)	Item
12	Confidential Details (Sub-Clause 1.12)	Item
<p><u>Confidentiality</u></p>		
Carried Forward		R
<p>Section No. 1 Bill No. 1 Preliminaries and General</p>		

Brought Forward		R
<p><u>The Contractor undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all Subcontractors and suppliers. Such information shall not be used in any way except in connection with the execution of the Works.</u></p> <p><u>No information regarding this project shall be published or disclosed without the prior written consent of the Employer.</u></p>		
13	Compliance with Laws (Sub-Clause 1.13)	Item
14	Joint and Several Liability (Sub-Clause 1.14)	Item
<u>THE EMPLOYER (Clause 2)</u>		
15	Right of Access to the Site (Sub-Clause 2.1)	Item
<u>Inspection of Site</u>		
<p><u>The tenderer/Contractor is to inspect the Site before pricing the Bill of Quantities and thoroughly acquaint himself with the conditions under which the Works are to be executed including the means of access to the Works, the condition of the roads and generally of all matters which may influence the execution of the Works.</u></p>		
<u>Handover of Site in Stages</u>		
<u>Handover of the Site to the Contractor is to be done in whole</u>		
16	Assistance (Sub-Clause 2.2)	Item
<u>Taxes, Customs and Excise Duties, Levies and Other Costs</u>		
Carried Forward		R
<p>Section No. 1 Bill No. 1 Preliminaries and General</p>		

	Brought Forward		R	
	<p>The Employer shall not be responsible for any income tax or other taxes levied on the Contractor in respect of the Contractor's obligations in terms of the Contract.</p> <p>The Contractor shall be responsible for complying with all importation regulations and the payment of all customs and excise duties, levies or any other costs incurred by the Contractor in respect of any imports.</p> <p>The Employer shall not be responsible for any costs incurred by the Contractor due to the Contractor's failure to comply with import control regulations.</p> <p>The Contractor shall, at his Cost, obtain from the relevant authorities and administer all necessary permits and licences and fulfil all immigration formalities to enable the Contractor to fulfil his obligations in terms of the Contract.</p>			
17	<p>Employer's Personnel and Other Contractors (Sub-Clause 2.3)</p> <p><u>Tenant Installations by the Employer's Personnel/Employer's other Contractors</u></p> <p><u>At the issue of a Taking-Over Certificate of a Section of the Works and where the Engineer instructs that tenant installation work is to be executed by Employer's Personnel or the Employer's other contractors, then:</u></p> <p>(a) the Contractor shall allow reasonable access,</p> <p>(b) the Contractor shall not receive any mark-up for overheads and profit on any omissions in this regard. Claims for loss of profit shall not be entertained, and</p> <p>(c) the Engineer shall carry out an inspection of such areas where tenant installation work is to be executed and shall record the state of completion and prepare a list of defects pertaining to such areas.</p>	Item		
18	Employer's Financial Arrangements (Sub-Clause 2.4)	Item		
19	Site Data and Items of Reference (Sub-Clause 2.5)	Item		
	Carried Forward		R	
	<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries and General</p>			

	Brought Forward		R	
20	Employer-Supplied Materials and Employer's Equipment (Sub-Clause 2.6: additional)	Item		
	<u>Advertising Rights</u>			
	All advertising rights on the Site and the hoardings are reserved exclusively for the Employer.			
	The Employer may elect to contract with advertising agencies for the erection of advertising hoardings, banners, wraps or the like for the duration of the Contract. The Contractor shall not prevent such an arrangement and will assist in the facilitation of same. The position and type of advertising structure shall be agreed with the Engineer so as not to hinder the Contractor in meeting the obligations under this Contract.			
	<u>THE ENGINEER (Clause 3)</u>			
21	Engineer's Duties and Authority (Sub-Clause 3.1)	Item		
	<u>Employer's Approval</u>			
	<u>The Engineer shall not be required to obtain the specific approval of the Employer before taking action under any of the Sub-Clauses of the General Conditions.</u>			
22	Delegation by the Engineer (Sub-Clause 3.2)	Item		
	<u>Delegated Authority</u>			
	<u>The Engineer for the time being assigns duties and delegates authority to representatives (as nominated hereunder or to be nominated) from the following organisations appointed by the Employer to act in their specific fields of expertise:</u>			
	The specific fields of expertise of the organisations stated herein before are broadly defined and are applicable as far as the Contractor is concerned in these functions as follows:			
	a) Architects: all architectural design, functional design and quality control,			
	Carried Forward		R	
	Section No. 1			
	Bill No. 1			
	Preliminaries and General			

Brought Forward		R
	<p>(b) Quantity surveyors: all measurements, valuations, financial assessments and all other quantity surveying and cost control functions,</p> <p>(c) Civil and structural engineers: the civil and structural engineering design, technical engineering co-ordination and engineering quality control,</p> <p>(d) HVAC services engineers: the design of the air conditioning, ventilation and sprinkler installations and related co-ordination and quality control,</p> <p>(e) Electrical and electronic engineers: the design of the electrical, security, communications and building management installations and related co-ordination and quality control,</p> <p>(f) Wet services engineers: the design of the wet services (plumbing) and related co-ordination and quality control,</p> <p>(g) Interior designers: the interior designs and related co-ordination and quality control, and</p> <p>(h) In respect of sundry design services and related co-ordination and quality control, by other consultants to be appointed. These will be advised to the Contractor as appointed from time to time.</p>	
23	<p>Instructions of the Engineer (Sub-Clause 3.3)</p> <p><u>Site Instructions</u></p> <p><u>Instructions will be issued by members of the professional team delegated by the Engineer in a site instruction book (with pages numbered consecutively) provided by and maintained by the Contractor.</u></p> <p>Site instruction books shall contain four copies, which are to be distributed as follows:</p> <p>(a) original top copy issued to Contractor,</p>	Item
Carried Forward		R
<p>Section No. 1 Bill No. 1 Preliminaries and General</p>		

Brought Forward		R
<p>(b) the second copy is to be passed on to the Engineer who will then distribute copies to all the relevant members of the professional team,</p> <p>(c) the third copy is to be kept by the issuer for his reference and purpose, and</p> <p>(d) the fourth copy is to remain in the site instruction book as a record of the site instruction.</p> <p>Once a site instruction is issued it is to be e-mailed forthwith to the Engineer by the Contractor. Site instructions shall for the purposes of Clause 13 become a Variation only upon countersignature and ratification by the Engineer.</p>		
24	Replacement of the Engineer (Sub-Clause 3.4)	Item
<p>Decide whether the number of days (42) is appropriate for the Employer to give notice to the Contractor of the intended date of replacement of the Engineer. If not, the following clause may be used.</p>		
25	Determinations (Sub-Clause 3.5)	Item
26	Interests of Engineer and Professional Team (Sub-Clause 3.6: additional)	Item
<u>THE CONTRACTOR (Clause 4)</u>		
27	Contractor's General Obligations (Sub-Clause 4.1)	Item
<u>Management Meetings</u>		
<p><u>The Engineer or the Contractor's Representative may require the other to attend one or more management meetings in order to review the arrangements for future work. The Engineer shall record the business of management meetings and supply copies of the record to those attending the meeting and to the Employer.</u></p>		
Carried Forward		R
<p>Section No. 1 Bill No. 1 Preliminaries and General</p>		

<p style="text-align: right;">Brought Forward</p> <p><u>Progress Meetings</u></p> <p><u>The Engineer, persons with delegated authority and the Contractor's Representative as required shall hold meetings related to the progress of the Works at regular intervals and at such other times as may be necessary.</u></p> <p>Subcontractors shall not be present at progress meetings unless specifically requested by the Contractor or Engineer to do so. The Engineer shall record and distribute the minutes of the progress meetings.</p> <p>The objectives of these meetings are to:</p> <p>(a) monitor and control progress of construction on Site,</p> <p>(b) monitor and control progress of information flow to Contractors/ Subcontractors,</p> <p>(c) identify problems relating to progress and to agree responsibilities for the resolution of problems,</p> <p>(d) monitor quality control by professional consultants/Contractors,</p> <p>(e) identify and record all claims, and</p> <p>(f) monitor and control costs and Variations to the preliminaries costs.</p> <p><u>Technical Meetings</u></p> <p><u>At the instance of the Engineer or the Contractor, meetings shall be held to deal with technical and Subcontractor's coordination matters.</u></p> <p><u>Technical meetings shall be chaired by the Contractor. The Contractor shall record and distribute the minutes of the technical meetings.</u></p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries and General</p>		R	

<p style="text-align: right;">Brought Forward</p> <p><u>Drawing Coordinator</u></p> <p><u>The Contractor shall provide a dedicated person or persons who shall be available from the Commencement Date up to the date of the issue of the Taking-Over Certificate for the Works, whose sole responsibility will be to:</u></p> <p>(a) familiarise himself with all Drawings produced by the professional team. This will involve a clear understanding of services and element co-ordination performed by the Engineer, in order that Subcontractors may be properly briefed,</p> <p>(b) compare everything shown on the detail Drawings with any work already built before the work shown on the detail Drawings is put in hand,</p> <p>(c) return to the Engineer any detail Drawings which do not agree in any respect with work already built and to return such Drawings to the Engineer for alteration, amendment or correction,</p> <p>(d) provide the professional team with comprehensive lists of shop drawings to be prepared by relevant Subcontractors. The list will be incorporated in the detail document tracking register,</p> <p>(e) check all shop drawings for sufficiency prior to submission to the relevant person delegated by the Engineer. It is expected that such checking will include all coordination and proactive resolution of any conflicting services and elements,</p> <p>(f) attend services and coordination meetings, called for by the Engineer as and when necessary, and to resolve coordination problems, and</p> <p>(g) update fortnightly the document tracking register in respect of shop drawings.</p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries and General</p>		R	

<p style="text-align: right;">Brought Forward</p> <p><u>Ordering of Materials</u></p> <p><u>The risk of ordering of Materials rests with the Contractor. Any errors in ordering due to the Contractor using the quantities in the Bill of Quantities shall consequently be for the Contractor's account and/or risk.</u></p> <p><u>Previous Work - Dimensional Accuracy</u></p> <p><u>The Contractor shall, within a reasonable period after taking possession of the Site, but not exceeding 10% of the initial Time for Completion or 20 days whichever is the lesser, check the existing levels, lines, profiles and the like affecting the Works and satisfy himself as to the dimensional accuracy of work previously executed. The Contractor shall notify the Engineer without delay and request a Variation regarding any dimensional inaccuracy.</u></p> <p><u>Previous Work - Defects</u></p> <p>The Contractor shall on becoming aware of a defect in work previously executed, notify the Engineer without delay and request a Variation regarding such defect.</p> <p><u>Inspection of Adjoining Properties</u></p> <p><u>Before commencing the Works the Engineer and Contractor shall make the necessary arrangements with the owners of adjacent buildings and properties and representatives of local authorities and shall inter alia inspect the existing buildings, structures, pavings, kerbs, channels and fences. The Contractor shall record all conditions that the Works could affect and inform the Engineer accordingly. The Contractor shall pay particular attention to cracks, defects and existing levels related to the existing buildings, structures, pavings, kerbs, channels and fences which could later be claimed to have been caused or disturbed by the Works.</u></p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries and General</p>		R	

<p style="text-align: right;">Brought Forward</p> <p>Where instructed by the Engineer, levels and photographs shall be taken by the Contractor and the Cost thereof shall be for the Employer's account. Certified copies of the above shall be lodged with the Engineer.</p> <p>Encroachments</p> <p>The Contractor shall notify the Engineer if any encroachments of adjoining buildings, structures, pavements, boundaries, services, etc. exist in order that the necessary arrangements may be made for the rectification of any such encroachments.</p> <p><u>Main Notice Board</u></p> <p><u>The Contractor shall provide a main notice board of a design approved by the Engineer with the title of the project and the names of the Employer, the company of the Engineer, the delegated organisations and the Contractor (with colour logos) sign written thereon. The Engineer shall instruct the Contractor where the board is to be erected.</u></p> <p><u>Subcontractors' Notice Boards</u></p> <p><u>The Contractor shall not allow Subcontractors' boards or advertising material on the Site without the Engineer's approval.</u></p> <p><u>Communication Facilities</u></p> <p><u>Communication facilities, as may be required or stated in these preliminaries or the Specification, shall be provided by the Contractor who shall be entitled to recover usage costs from the users thereof.</u></p> <p><u>Facilities for use by the Engineer and the Professional Team</u></p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries and General</p>		R	

	Brought Forward		R	
	<p>The Contractor shall in a location within the Site as approved by the Engineer maintain throughout the Time for Completion and remove at the date of the issue of the Taking-Over Certificate for the Works as a whole, air conditioned and well lit office facilities and furnishings and provide equipment stated hereinafter for the exclusive use of the Engineer and the professional team.</p> <p><u>Stormwater Disposal</u></p> <p><u>The Contractor shall supply all necessary Contractor's Equipment and labour for and shall operate and maintain a proper and efficient method of disposal of stormwater from the Works and the Site at all times throughout the duration of the Contract.</u></p> <p>Under no circumstances will any permanent pumps be allowed to be used for stormwater disposal except as may be required for commissioning and testing.</p>			
28	<p>Performance Security (Sub-Clause 4.2)</p> <p><u>Performance Security</u></p> <p><u>The Contractor shall provide to the Employer a Performance Security (Demand Guarantee) which shall be furnished by a bank or financial entity acceptable to the Employer and which is registered or licensed to do business in the Country.</u></p> <p>The Performance Security (Demand Guarantee) shall be in the format as suggested in Annex C of "Forms of Securities" in the guidance section of the FIDIC Conditions of Contract document.</p> <p>The above mentioned Demand Guarantee provides for the guaranteed amount to be reduced by a percentage when the Taking-Over Certificate for the whole of the Works becomes available. Indicate as may be necessary.</p>	Item		
29	Contractor's Representative (Sub-Clause 4.3)	Item		
30	Subcontractors (Sub-Clause 4.4)	Item		
	Carried Forward		R	
	<p>Section No. 1 Bill No. 1 Preliminaries and General</p>			

	Brought Forward		R	
	<u>Local Subcontractors</u>			
	<u>Where practicable, the Contractor shall give a fair and reasonable opportunity for contractors from the Country to be appointed as Subcontractors.</u>			
31	Assignment of Benefit of Subcontract (Sub-Clause 4.5)	Item		
32	Co-operation (Sub-Clause 4.6)	Item		
33	Setting Out (Sub-Clause 4.7)	Item		
34	Safety Procedures (Sub-Clause 4.8)	Item		
	<u>Safety</u>			
	<u>The Contractor shall provide personal protective equipment to any member of the professional team visiting the Site and shall ensure the use thereof.</u>			
	The Temporary Works for purposes of this Sub-Clause shall include hoardings, gantries, fans, safety screens, barriers, access gates, covered gangways and the like as necessary for the enclosure of the Works and elements thereof.			
	<u>Fire Protection</u>			
	<u>The Contractor shall provide all temporary fire protection to the Works for the duration of the Contract in accordance with his own and/or the Employer's insurance requirements and the local and other authorities' regulations. The Contractor shall pay all charges in connection therewith and shall remove all temporary fire protection on completion of the Works.</u>			
35	Quality Assurance (Sub-Clause 4.9)	Item		
36	Site Data (Sub-Clause 4.10)	Item		
37	Sufficiency of the Accepted Contract Amount (Sub-Clause 4.11)	Item		
38	Unforeseeable Physical Conditions (Sub-Clause 4.12)	Item		
	Carried Forward		R	
	Section No. 1			
	Bill No. 1			
	Preliminaries and General			

**PASSENGER RAIL AGENCY OF SOUTH AFRICA
 BID NUMBER: HO/CRES/DBN/ENERGY/2/8/2024
 1000KWP PHOTOVOLTAIC SOLAR ROOFTOP
 DURBAN STATION**

	Brought Forward		R
39	Rights of Way and Facilities (Sub-Clause 4.13)	Item	
40	Avoidance of Interference (Sub-Clause 4.14)	Item	
41	Access Route (Sub-Clause 4.15)	Item	
	<u>Access</u>		
42	Transport of Goods (Sub-Clause 4.16)	Item	
43	Contractor's Equipment (Sub-Clause 4.17)	Item	
44	Protection of the Environment (Sub-Clause 4.18)	Item	
	<u>Disturbance</u>		
	The Contractor shall execute the Works with a minimum of disturbance to adjoining premises, any parts of the Works already handed over and the occupants of those premises and/or parts.		
	Insert one or both of the following clauses as may be required.		
	<u>Nuisance, Inconvenience, etc.</u>		
	All work is to be carried out in such a manner as to cause no unacceptable or unreasonable dust, noise, vibrations, nuisance, inconvenience, annoyance and the like to the public, others, other properties and traffic in so far as they exceed the permissible limitations set by government legislation or by the local authority. Any delays, stoppages and the like arising from or in order to comply with the above will not constitute grounds for a Variation.		
	<u>Controlling all Forms of Pollution</u>		
	<u>The Contractor shall be responsible for and take all precautions in controlling by whatever means necessary all forms of pollution emanating from the Site during the Time for Completion due to inter alia noise, artificial light, wind-blown sand, dust, deposits of mud, etc.</u>		
	Carried Forward		R
	Section No. 1		
	Bill No. 1		
	Preliminaries and General		

Brought Forward			R
<p>The Contractor is to ensure that all roads which adjoins the Site and are used by the Contractor during the execution of the Works are kept clean and free of any dirt or debris caused by the execution of the Works.</p> <p><u>Environmental Impact Assessment</u></p> <p><u>Refer to the modifications and/or supplements to Sub-Clause 4.10 with reference to the Environmental Impact Assessment (EIA).</u></p>			
45	Electricity, Water and Gas (Sub-Clause 4.19)	Item	
46	Employer's Equipment and Free-Issue Material (Sub-Clause 4.20)	Item	
47	Progress Reports (Sub-Clause 4.21)	Item	
<p><u>Copies of Monthly Progress Reports</u></p> <p><u>Monthly progress reports shall be prepared by the Contractor and submitted to the Engineer in 5 copies.</u></p> <p><u>Contractor's Daily Report</u></p> <p><u>The Contractor shall keep a rain gauge and a thermometer in a secure area of the Site and take readings on a daily basis.</u></p> <p>The Contractor shall report daily on the following:</p> <p>(a) weather conditions (including rainfall and minimum and maximum temperatures),</p> <p>(b) the Contractor's own and the Subcontractors' manpower status, and</p> <p>(c) any other pertinent information pertaining to the Contract such as visitors, major equipment received, Materials received, arrival and/or removal of Contractor's Equipment and other notable events.</p>			
48	Security of the Site (Sub-Clause 4.22)	Item	
49	Contractor's Operations on Site (Sub-Clause 4.23)	Item	
Carried Forward			R
<p>Section No. 1 Bill No. 1 Preliminaries and General</p>			

Brought Forward		R
<p><u>Defined Works Area</u></p> <p><u>Any restrictions to the Site are indicated in the Specification or on the Drawings. The Contractor may not occupy such restricted areas for the execution of the Works.</u></p> <p><u>Existing Premises Occupied</u></p> <p><u>Existing premises will be in use and occupied during the execution of the Works. The Contractor shall execute the Works as will least interfere with the general routine of the occupants of the premises and minimise any nuisance from dust, noise or other causes.</u></p>		
50	Fossils (Sub-Clause 4.24)	Item
51	Enclosure of the Works (Sub-Clause 4.25: additional)	Item
<p><u>Enclosure of the Works</u></p> <p>The Contractor shall erect, maintain and remove at completion, hoardings with gantries, fans, safety screens, barriers, access gates, covered gangways and the like as necessary for the enclosure of the Works and elements thereof, all for the protection of the public and others.</p>		
52	Protection/Isolation of Existing/Sectionally Occupied Works (Sub-Clause 4.26: additional)	Item
<p><u>Protection</u></p> <p>The Contractor shall provide all reasonable temporary measures to protect/isolate the existing and/or Sections of the occupied Works and remove such measures on completion.</p>		
53	Waiver of Lien or Right of Continuing Possession of the Works (Sub-Clause 4.27: additional)	Item
Carried Forward		R
<p>Section No. 1 Bill No. 1 Preliminaries and General</p>		

<p style="text-align: right;">Brought Forward</p> <p><u>Waiver of Lien or Right of Continuing Possession of the Works</u></p> <p><u>The Contractor shall be required to waive in favour of the Employer any lien or right of continuing possession of the Works which he may be entitled to.</u></p> <p><u>The Contractor shall, simultaneously with the signing by him or on his behalf of the Contract Agreement, sign and deliver to the Engineer, a waiver of Contractor's lien or right of continuing possession of the Works which shall:</u></p> <p>(a) conform to the specimen waiver of Contractor's lien or right of continuing possession of the Works which is appended as Annexure (Specimen Waiver of Contractor's lien or right of continuing possession of the Works) to Section 6 (Bill of Quantities), and</p> <p>(b) be signed on behalf of the Contractor or an official duly authorised thereto by the Contractor, proof of which authority, in the form of a certified extract of the minutes of the principals of the Contractor, shall also be delivered to the Engineer by the Contractor. There shall be no obligation on the Employer to provide the Contractor with any security in anticipation or in consideration of the signing and delivery of the waiver of Contractor's lien or right of continuing possession of the Works in the manner referred to above.</p> <p>The Contractor shall, simultaneously with the signing of every nominated or domestic subcontract, deliver to the Engineer a waiver of Subcontractor's lien or right of continuing possession of the Works which shall:</p> <p>(a) mutatis mutandis conform to the specimen waiver of Contractor's lien or right of continuing possession of the Works referred to above, and</p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries and General</p>		R	

Brought Forward		R
	(b) be signed on behalf of the relative nominated or domestic Subcontractor by an official duly authorised thereto by the Subcontractor, proof of which authority in the form of a certified extract of the minutes of the principals of the relative nominated or domestic Subcontractor, shall also be delivered to the Engineer by the Contractor. There shall be no obligation on the Employer to provide the Contractor or relevant nominated or domestic Subcontractor with any security in consideration of the signing and delivery of the waiver in respect of Contractor's lien or right of continuing possession of the Works in the manner referred to above.	
54	Cash Flow Projections (Sub-Clause 4.28: additional)	Item
	<u>Cash Flow Projections</u>	
	The Contractor shall provide all reasonable assistance to the Engineer in the preparation of cash flow projections. The projections shall be based on the programme for the Works and shall be updated as and when the programme requires updating. The co-operation of the Contractor in terms of this item shall not constitute a Schedule of Payments in accordance with Sub-Clause 14.4 [Schedule of Payments] and shall not prejudice his right to receive payment in terms of the Contract.	
	<u>NOMINATED SUBCONTRACTORS (Clause 5)</u>	
55	Definition of "nominated Subcontractor" (Sub-Clause 5.1)	Item
56	Objection to Nomination (Sub-Clause 5.2)	Item
57	Payments to nominated Subcontractors (Sub-Clause 5.3)	Item
58	Evidence of Payments (Sub-Clause 5.4)	Item
59	Nominated Subcontract Agreements (Sub-Clause 5.5: additional)	Item
Carried Forward		R
Section No. 1 Bill No. 1 Preliminaries and General		

	Brought Forward		R
	<p><u>Onerous Conditions</u></p> <p><u>The Contractor shall not call for onerous or unreasonable conditions in any contract between the Contractor and a nominated Subcontractor other than those for which the Contractor is liable under this Contract.</u></p> <p>The Contractor may wish to impose the same delay damages on nominated Subcontractors as that which is imposed on the Contractor. The imposition of such delay damages on nominated Subcontractors (especially the smaller nominated Subcontractors) may be onerous and could result in inflated tenders or even in some nominated Subcontractors not submitting tenders.</p> <p>The following clause may be considered for limiting the delay damages which may be imposed on nominated Subcontractors.</p> <p><u>Delay Damages</u></p> <p><u>Delay damages for any nominated Subcontractor's portion of the Works shall be limited to ??% per day of the Accepted Contract Amount for the nominated Subcontractor's portion of the Works with a maximum amount of delay damages of ??% of the Accepted Contract Amount for the nominated Subcontractor's portion of the Works but shall nevertheless not exceed the delay damages per day and the maximum amount of delay damages applicable to the Contractor.</u></p>		
60	General Attendance (Sub-Clause 5.6: additional)	Item	
	<p><u>General Attendance</u></p> <p>The Contractor shall at his own expense provide the following general attendance on nominated Subcontractors executing the portion of the Works assigned to such nominated Subcontractors:</p> <p>(a) access to the Site and places where the nominated subcontract work is to be carried out, including the reasonable use of any temporary Materials hoists erected by the Contractor,</p>		
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 Preliminaries and General</p>		

	Brought Forward		R
	<p>(b) the use at reasonable times, by arrangement with the Contractor, of hoisting equipment erected for the Contractor's own use,</p> <p>(c) the provision of water and lighting and of single phase electric power to a position within 25 metres and three phase electric power to a position within 50 metres of the place where the nominated subcontract work is to be carried out but excluding water, fuel and power for commissioning of any installation,</p> <p>(d) the provision of an area for the nominated Subcontractor to establish temporary office accommodation and workshops and for the storage of the nominated Subcontractor's equipment, plant and materials,</p> <p>(e) the use of erected scaffolding belonging to the Contractor, in common with others having the like right, while it remains erected on the Site,</p> <p>(f) the use of ablution facilities and the like as provided on Site, and</p> <p>(g) the use of telephone and internet facilities as provided on Site subject to the payment by the nominated Subcontractor for usage thereof.</p>		
61	<p>Special Attendance (Sub-Clause 5.7: additional)</p> <p><u>Special Attendance</u></p> <p>Special attendance on each nominated Subcontractor is described in detail in separate items in the Bill of Quantities where Provisional Sums are stated in respect of work to be executed by nominated Subcontractors and shall include inter alia for unloading, storing, placing in position, providing special power supplies, specific hoisting, craneage and scaffolding requirements, provision of temporary casing and/or other specific protection of that portion of the Works assigned to such nominated Subcontractors, special security, clearing away rubbish and any other special attendance items.</p>	Item	
62	<p>Commissioning - Fuel, Water and Power (Sub-Clause 5.8: additional)</p>	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 Preliminaries and General</p>		

	Brought Forward		R	
	The cost of fuel, water and electric power required for the commissioning of mechanical and other specialised installations shall be borne by the nominated Subcontractor appointed for the relevant subcontract works in terms of the conditions under which the said nominated Subcontractor has contracted for the specialist work involved.			
	<u>STAFF AND LABOUR (Clause 6)</u>			
63	Engagement of Staff and Labour (Sub-Clause 6.1)	Item		
	<u>Foreign Personnel</u>			
	<u>The Contractor shall ensure that any foreign personnel who are necessary for the execution of the Works are provided with the required residence visas and work permits.</u>			
	The Contractor shall be responsible for the return to the place where they were recruited or to the domicile of such foreign Contractor's Personnel.			
	In the event of the death in the Country of any of such personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial and shall bear any expenses in this regard.			
64	Rates of Wages and Conditions of Labour (Sub-Clause 6.2)	Item		
65	Persons in the Service of Employer (Sub-Clause 6.3)	Item		
	<u>Recruiting Personnel of Professional Team</u>			
	<u>The Contractor or his Subcontractors shall not, during the Time for Completion, recruit or attempt to recruit the personnel of any of the professional team.</u>			
66	Labour Laws (Sub-Clause 6.4)	Item		
67	Working Hours (Sub-Clause 6.5)	Item		
68	Facilities for Staff and Labour (Sub-Clause 6.6)	Item		
	Carried Forward		R	
	Section No. 1 Bill No. 1 Preliminaries and General			

	Brought Forward		R
69	<p>Health and Safety (Sub-Clause 6.7)</p> <p>Without limiting the generality of the provisions of this Sub-Clause 6.7, the Contractor's attention is drawn to the provisions of Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993. It is specifically stated that the Employer shall prepare a documented health and safety specification for the Works (refer to Annexure ? for a copy of the relevant specification) and that the Employer shall ensure that the Contractor has made provision for the cost of health and safety measures during the execution of the Works. The Contractor shall price opposite this item for compliance with the act and the regulations and the provisions of the aforementioned health and safety specification.</p> <p>The Contractor shall:</p> <p>(a) comply with the health and safety specification for the Works,</p> <p>(b) prepare and agree the health and safety plan for the Works with the construction health and safety consultant,</p> <p>(c) co-operate with the construction health and safety consultant in all respects,</p> <p>(d) manage the compliance of all Subcontractors with the regulations and with the health and safety plan and specification, and</p> <p>(e) conform to the conditions contained in the Employer's health and safety specification.</p> <p><u>Health and Safety Precautions</u></p> <p><u>The Contractor shall, at all times, take the necessary precautions to protect all personnel and labour employed on the Site from insect and pest nuisance, and to reduce their danger to health. The Contractor shall provide suitable prophylactics for the Contractor's Personnel and shall comply with the regulations of the local health authorities, including use of appropriate insecticide.</u></p>	Item	
	Carried Forward		R
	<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries and General</p>		

	Brought Forward		R
70	Contractor's Superintendence (Sub-Clause 6.8)	Item	
71	Contractor's Personnel (Sub-Clause 6.9)	Item	
72	Records of Contractor's Personnel and Equipment (Sub-Clause 6.10)	Item	
73	Disorderly Conduct (Sub-Clause 6.11)	Item	
	<u>PLANT, MATERIALS AND WORKMANSHIP (Clause 7)</u>		
74	Manner of Execution (Sub-Clause 7.1)	Item	
	<u>Management of the Works</u>		
	<u>The Contractor is responsible for the management of the sequence of carrying out of the Works such that subsequent cutting or patching of finished work is avoided.</u>		
75	Samples (Sub-Clause 7.2)	Item	
	<u>Mock-ups</u>		
	<u>The following is deemed to be inserted:</u>		
	c) assembly of various elements of the building or installation (mock-ups) instructed by the Engineer.		
76	Inspection (Sub-Clause 7.3)	Item	
77	Testing (Sub-Clause 7.4)	Item	
	<u>Specific Tests</u>		
	<u>In addition to any other tests called for, the Contractor shall flood test all waterproofing and pressure test all windows for water leakage, all as required and instructed by the Engineer.</u>		
	Carried Forward		R
	Section No. 1 Bill No. 1 Preliminaries and General		

Brought Forward		R
<p><u>Schedule of Testing Requirements</u></p> <p><u>The Contractor shall prepare a schedule, for submission at the second progress meeting, of the testing requirements for each trade listed under the headings "On Site tests", "Laboratory tests" and "Other special testing requirements" as specified or required.</u></p>		
78	Rejection (Sub-Clause 7.5)	Item
79	Remedial Work (Sub-Clause 7.6)	Item
80	Ownership of Plant and Materials (Sub-Clause 7.7)	Item
81	Royalties (Sub-Clause 7.8)	Item
<p><u>COMMENCEMENT, DELAYS AND SUSPENSION (Clause 8)</u></p>		
82	Commencement of Works (Sub-Clause 8.1)	Item
<p><u>Commencement Date</u></p> <p><u>Notwithstanding the provisions of Sub-Clause 8.1, the Commencement Date shall be as stated in the Appendix to Tender.</u></p>		
83	Time for Completion (Sub-Clause 8.2)	Item
<p><u>Time for Completion</u></p> <p><u>The Time for Completion shall be as stated in the Appendix to Tender.</u></p>		
84	Programme (Sub-Clause 8.3)	Item
<p><u>Number of Days for Contractor to Submit Programme</u></p> <p><u>The Contractor shall submit a detailed time programme to the Engineer within 28 days after receiving the notice in terms of this Sub-Clause.</u></p>		
Carried Forward		R
<p>Section No. 1 Bill No. 1 Preliminaries and General</p>		

	Brought Forward		R
	<u>Programme for the Works</u>		
	<u>Notwithstanding the provision of Sub-Clause 8.3, the following shall apply:</u>		
85	Extension of Time for Completion (Sub-Clause 8.4)	Item	
	<u>Exceptionally adverse climatic conditions</u>		
	<u>With reference to Sub-Clause 8.4(c) "exceptionally adverse climatic conditions" shall be read in the context of being exceptional beyond what may be expected on the Site at any given time of the year.</u>		
	<u>Extension of time</u>		
	<u>Notwithstanding the provisions of Sub-Clause 8.4, the following shall apply: Any extension of time which is granted by the Engineer will be annotated to affect selected activities in the programme and the associated activities will be incorporated by revisions to the programme by the Contractor. Should the additional activities or the extension of time on existing activities fall on a non-critical area of the programme, extension will be limited to the activities affected by the said additional activities or extensions and the contract dates shall not be affected. If, however, the additional activities fall on the critical path, the Engineer shall take this into account when granting any extension of time in terms of the Contract.</u>		
	The Contractor agrees that the Time for Completion and the completion of Sections have been stipulated in the Contract for the benefit of the Employer. Without derogating from the generality of the foregoing principle the following shall apply:		
	(a) the Contractor shall not be entitled to deliver the Site and the Works to the Employer prior to the Time for Completion unless sanctioned by the Engineer,		
	(b) should there for any reason be any float period indicated in the programme prior to the Time for Completion, then this float period shall be utilised to absorb any delays or extensions of time without affecting the Time for Completion, and		
	Carried Forward		R
	Section No. 1		
	Bill No. 1		
	Preliminaries and General		

	Brought Forward		R
	<p>(c) the Contractor shall, at all times, ensure that, notwithstanding the approval or sanctioning, reviewing or inspection of a programme or any revision of a programme by the Engineer, the Time for Completion and the issue of the Taking-over Certificate shall take place strictly in accordance with the provisions of the Contract.</p> <p>A defective or faulty programme, even if so sanctioned, approved, reviewed or inspected by the Engineer, shall therefore not constitute a cause for granting an extension of time for completion of the Works or for entitling the Contractor to the payment by the Employer in terms of the Contract of any loss, compensation or damage whatsoever.</p>		
86	Delays Caused by Authorities (Sub-Clause 8.5)	Item	
87	Rate of Progress (Sub-Clause 8.6)	Item	
	<u>Overtime</u>		
	<u>Should overtime be required to be worked for any reason whatsoever, the Cost of such overtime is to be borne by the Contractor unless the Engineer has specifically authorised, prior to execution thereof, that Costs for such overtime are to be borne by the Employer.</u>		
88	Delay Damages (Sub-Clause 8.7)	Item	
	Refer to Sub-Clause 5.5 (additional): [Nominated Subcontract Agreements] for Delay Damages related to nominated Subcontract agreements.		
89	Suspension of Work (Sub-Clause 8.8)	Item	
90	Consequences of Suspension (Sub-Clause 8.9)	Item	
91	Payment for Plant and Materials in Event of Suspension (Sub-Clause 8.10)	Item	
92	Prolonged Suspension (Sub-Clause 8.11)	Item	
93	Resumption of Work (Sub-clause 8.12)	Item	
	Carried Forward		R
	Section No. 1		
	Bill No. 1		
	Preliminaries and General		

	Brought Forward		R
	<u>TESTS ON COMPLETION (Clause 9)</u>		
94	Contractor's Obligations (Sub-Clause 9.1)	Item	
95	Delayed Tests (Sub-Clause 9.2)	Item	
96	Retesting (Sub-Clause 9.3)	Item	
97	Failure to Pass Tests on Completion (Sub-Clause 9.4)	Item	
	<u>EMPLOYER'S TAKING OVER (Clause 10)</u>		
98	Taking Over of the Works and Sections (Sub-Clause 10.1)	Item	
	<u>Issue of Taking-Over Certificate</u>		
	<u>The following shall be deemed to be added to Sub-Clause 10.1:</u>		
	The Taking-Over Certificate will not be issued by the Engineer until such time as all the following items are complete:		
99	Taking Over of Parts of the Works (Sub-Clause 10.2)	Item	
	<u>Issue of Taking-Over Certificate</u>		
	<u>The following shall be deemed to be added to Sub-Clauses 10.2:</u>		
100	Interference with Tests on Completion (Sub-Clause 10.3)	Item	
101	Surfaces Requiring Reinstatement (Sub-Clause 10.4)	Item	
	<u>DEFECTS LIABILITY (Clause 11)</u>		
102	Completion of Outstanding Work and Remedying Defects (Sub-Clause 11.1)	Item	
103	Cost of Remedying Defects (Sub-Clause 11.2)	Item	
104	Extension of Defects Notification Period (Sub-Clause 11.3)	Item	
	Carried Forward		R
	Section No. 1		
	Bill No. 1		
	Preliminaries and General		

	Brought Forward		R
105	Failure to Remedy Defects (Sub-Clause 11.4)	Item	
106	Removal of Defective Work (Sub-Clause 11.5)	Item	
107	Further Tests (Sub-Clause 11.6)	Item	
108	Right of Access (Sub-Clause 11.7)	Item	
109	Contractor to Search (Sub-Clause 11.8)	Item	
110	Performance Certificate (Sub-Clause 11.9)	Item	
111	Unfulfilled Obligations (Sub-Clause 11.10)	Item	
112	Clearance of Site (Sub-Clause 11.11)	Item	
	<u>MEASUREMENT AND EVALUATION (Clause 12)</u>		
113	Works to be Measured (Sub-Clause 12.1)	Item	
114	Method of Measurement (Sub-clause 12.2)	Item	
	State the applicable standard method of measurement under a suitable heading underlined.		
	Standard System of Measuring Building Work (seventh edition) is applicable.		
115	Evaluation (Sub-Clause 12.3)	Item	
	The following clause may be considered for the adjustment of preliminaries in which case provision is to be made in the Appendix to Tender for a predetermined selection of Option A or B or in the case where no predetermined selection is to be made for the tenderer to make such selection.		
	Carried Forward		R
	Section No. 1 Bill No. 1 Preliminaries and General		

<p style="text-align: right;">Brought Forward</p> <p><u>Adjustment of Preliminaries</u></p> <p><u>The amount of preliminaries shall be adjusted to take account of the effect of changes in time and/or value on preliminaries. Such adjustment shall be based on the particulars provided by the Contractor for this purpose in terms of Options A or B as selected in the Appendix to Tender, shall preclude any further adjustment of the amount of preliminaries and shall apply notwithstanding the actual employment of resources by the Contractor in the execution of the Works.</u></p> <p><u>Notwithstanding the above, the provisions of Sub-Clause 19.4(b) [Consequences of Force Majeure] shall nevertheless apply but limited to payment of any additional Cost.</u></p> <p><u>Where no selection is made in the Appendix to Tender, Option A shall apply.</u></p> <p><u>For the adjustment of preliminaries both the Accepted Contract Amount and the final Contract Price shall exclude the amount of preliminaries, contingency sum(s) and any provision in terms of Sub-Clause 13.8 [Adjustments for Changes in Cost] for changes in cost (cost fluctuation).</u></p> <p><u>Option A</u></p> <p>The preliminaries shall be adjusted as follows in accordance with an allocation of preliminaries amounts to be provided by the Contractor and subsequently agreed with the Engineer within 21 days of the date upon which the Letter of Acceptance is issued to the Contractor:</p> <p>(a) an amount which shall not be varied,</p> <p>(b) an amount varied in proportion to the final Contract Price as compared to the Accepted Contract Amount, and</p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries and General</p>		R	

	Brought Forward		R
	<p>(c) an amount varied in proportion to the number of days extension of the Time for Completion to which the Contractor is entitled to under Sub-Clause 8.4 [Extension of Time for Completion] as compared to the number of days in the initial Time for Completion.</p> <p>Where the previously stated information is not provided the following allocation of preliminaries amounts shall apply:</p> <p>(a) 10% shall not be varied,</p> <p>(b) 15% shall be varied in proportion to the final Contract Price as compared to the Accepted Contract Amount, and</p> <p>(c) 75% shall be varied in proportion to the number of days extension of the Time for Completion to which the Contractor is entitled to under Sub-Clause 8.4 [Extension of Time for Completion] as compared to the number of days in the initial Time for Completion.</p> <p>Where completion in Sections is required, the Contractor shall provide an apportionment of preliminaries amounts per Section. Should the Contractor fail to provide the apportionment of preliminaries amounts per Section within the previously stated period, the categorised amounts shall be prorated to the cost of each Section within the Accepted Contract Amount as determined by the Engineer.</p> <p><u>Option B</u></p> <p>The preliminaries shall be adjusted in accordance with a detailed breakdown of preliminaries amounts for the Works as a whole, or per Section where completion in Sections is required, which shall be provided by the Contractor and subsequently agreed with the Engineer within 21 days of the date upon which the Letter of Acceptance is issued to the Contractor. Such breakdown shall include, inter alia, administrative and supervisory staff charges and charges for the use of Contractor's Equipment, all in terms of the programme for the execution of the Works.</p>		
116	Omissions (Sub-Clause 12.4)	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 Preliminaries and General</p>		

Brought Forward			R
<u>VARIATIONS AND ADJUSTMENTS (Clause 13)</u>			
117	Right to Vary (Sub-Clause 13.1)	Item	
118	Value Engineering (Sub-Clause 13.2)	Item	
119	Variation Procedure (Sub-Clause 13.3)	Item	
120	Provisional Sum (Sub-Clause 13.4)	Item	
<u>Currency Proportions</u>			
<u>The currency proportions shall be as indicated in the Appendix to Tender.</u>			
121	Daywork (Sub-Clause 13.5)	Item	
<u>Overhead Charges and Profit</u>			
<u>The "relevant percentage rate" mentioned in Sub-Clause 13.5 (b)(ii) shall be a percentage calculated from the amount priced by the Contractor in the Bill of Quantities for the relevant overheads and profit related to the relevant Provisional Sum.</u>			
122	Adjustments for Changes in Laws (Sub-Clause 13.6)	Item	
123	Adjustments for Changes in Cost (Sub-Clause 13.7)	Item	
All fluctuations in the Cost of Materials, Contractor's Personnel, Goods, Plant, Contractor's Equipment and any other Cost shall be for the account of the Contractor.			
<u>CONTRACT PRICE AND PAYMENT (Clause 14)</u>			
124	The Contract Price (Sub-Clause 14.1)	Item	
125	Advance Payment (Sub-Clause 14.2)	Item	
126	Application for Interim Payment Certificates (Sub-Clause 14.3)	Item	
Carried Forward			R
Section No. 1			
Bill No. 1			
Preliminaries and General			

	Brought Forward		R
	<u>Payment of Preliminaries</u>		
	<u>The payment of preliminaries shall be made in in terms of Options A or B as selected in the Appendix to Tender. Where no selection is made in the Appendix to Tender, Option A shall apply.</u>		
	<u>Option A</u>		
	<u>Assessed by the Engineer, an amount prorated to the value of the Works executed in the same ratio as the amount of preliminaries to the Accepted Contract Amount, which Accepted Contract Amount shall exclude the amount of preliminaries. Contingency sum(s) and any provision for changes in Cost (cost fluctuation) shall be excluded for the calculation of the aforesaid ratio.</u>		
	<u>Option B</u>		
	<u>An amount agreed by the Engineer and the Contractor in terms of the Bill of Quantities to identify an initial establishment charge, a time based charge and a final disestablishment charge. Payment of the time based charge shall be adjusted from time to time as may be necessary to take into account the progress of the Works. ?</u>		
127	Schedule of Payments (Sub-Clause 14.4)	Item	
128	Plant and Materials Intended for the Works (Sub-Clause 14.5)	Item	
129	Issue of Interim Payment Certificates (Sub-Clause 14.6)	Item	
	<u>Number of Days for Issuing Interim Payment Certificate</u>		
	<u>The Engineer shall, within 10 days after receiving a Statement and supporting documents, issue to the Employer and Interim Payment Certificate.</u>		
130	Payment (Sub-Clause 14.7)	Item	
	Carried Forward		R
	Section No. 1		
	Bill No. 1		
	Preliminaries and General		

<p style="text-align: right;">Brought Forward</p> <p>Decide whether the following number of days are appropriate:</p> <p>(a) the first instalment of the advance payment after issuing the Letter of Acceptance (42) or after receiving the documents in accordance with Sub-Clause 4.2 [Performance Security] and Sub-Clause 14.2 [Advance Payment]] (21),</p> <p>(b) payment of an Interim Payment Certificate after receiving the statement and supporting documents (56), and</p> <p>(c) payment of the Final Payment Certificate after receiving the Payment Certificate (56).</p> <p>Change if any of the above is not applicable bearing in mind that in the case of (b) and (c) above, the period may have a negative impact on the cash flow of the Contractor which may result in an increased Tender.</p> <p><u>Period for Payment of Interim Payment Certificate</u></p> <p><u>The Employer shall pay to the Contractor the amount certified in each Interim Payment Certificate within 30 days after the Engineer receives the Statement and supporting documents.</u></p> <p><u>Period for Payment of Final Payment Certificate</u></p> <p><u>The Employer shall pay to the Contractor the amount certified in the Final Payment Certificate within 30 days after the Employer receives this Payment Certificate.</u></p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries and General</p>		R	

<p style="text-align: right;">Brought Forward</p> <p><u>Electronic Funds Transfer</u></p> <p><u>Should the Employer and the Contractor agree upon Electronic Funds Transfer (abbreviated as "EFT") payments being made, the Contractor agrees to:</u></p> <p><u>(a) provide the Employer with written details of the Contractor's bank account setting out the name of the Contractor's bank, the branch name or number, the account number and swift code, and</u></p> <p><u>(b) provide the Employer with a photocopy of a cancelled cheque from the Contractor's bank account referred to above.</u></p> <p><u>The Employer will submit to the Contractor proof of transfer on interim and final payments.</u></p> <p><u>The Contractor further agrees and acknowledges that the Employer, on giving or causing to be given an instruction to his bankers to effect the transfer of the amount due to the Contractor, will have fully and effectively discharged his obligation to make the relevant payment to the Contractor.</u></p> <p><u>The Contractor indemnifies the Employer, its employees and/or agents against any claims of whatsoever nature which may be brought against any of them alleging non-payment of any amounts due to the Contractor, for any EFT payment transfer which has been effected in terms of the above.</u></p> <p><u>Invoices are to be made out in the name and address as stated in the Appendix to Tender.</u></p> <p><u>Interim Payment Certificates</u></p> <p><u>An interim Payment Certificate shall not be evidence that the Works and/or Plant are in terms of this Contract.</u></p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries and General</p>		R	

	Brought Forward		R
	<u>Tax invoice</u>		
	<u>Payment of a Payment Certificate is subject to the Contractor providing a tax invoice to the Employer in terms of any applicable Law within 7 days of the date upon which such Payment Certificate is issued by the Engineer. Any delay in providing the required tax invoice may delay the payment of the relevant Payment Certificate.</u>		
131	Delayed Payment (Sub-Clause 14.8)	Item	
132	Release of Retention Money (Sub-Clause 14.9)	Item	
	<u>Retention Money Guarantee</u>		
	<u>If the Contractor wishes to provide a Retention Money guarantee in lieu of retention being deducted the selection shall be made in the Appendix to Tender. Such Retention Money guarantee shall be issued by a bank or financial entity acceptable to the Employer and which is registered or licensed to do business in the Country.</u>		
	The Retention Money guarantee shall be in the format as suggested in Annex F of "Forms of Securities" in the guidance section of the FIDIC Conditions of Contract document. The guarantee shall be governed by the Laws of the Country.		
133	Statement at Completion (Sub-Clause 14.10)	Item	
	<u>Number of Days for Submitting Contractor's Statement at Completion</u>		
	<u>Within 90 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Engineer the required copies of a Statement at completion with supporting documents.</u>		
	<u>Number of Copies of Statement at Completion</u>		
	<u>The Contractor shall submit to the Engineer Three copies of a Statement at completion with supporting documents.</u>		
	Carried Forward		R
	Section No. 1 Bill No. 1 Preliminaries and General		

	Brought Forward		R
134	Final Statement (Sub-Clause 14.11)	Item	
	<u>Period for Receiving the Performance Certificate</u>		
	<u>Within 30 days after receiving the Performance Certificate, the Contractor shall submit to the Engineer the required number of copies of a draft final Statement with supporting documents.</u>		
	<u>Copies of Draft Final Statement</u>		
	<u>The Contractor shall submit to the Engineer 2 copies of a draft final Statement with supporting documents.</u>		
135	Discharge (Sub-Clause 14.12)	Item	
136	Issue of Final Payment Certificate (Sub-Clause 14.13)	Item	
137	Cessation of Employer's Liability (Sub-Clause 14.14)	Item	
138	Currencies of Payment (Sub-Clause 14.15)	Item	
	<u>TERMINATION BY EMPLOYER (Clause 15)</u>		
139	Notice to Correct (Sub-Clause 15.1)	Item	
140	Termination by Employer (Sub-Clause 15.2)	Item	
141	Valuation at Date of Termination (Sub-Clause 15.3)	Item	
142	Payment after Termination for Contractor's Default (Sub-Clause 15.4)	Item	
143	Termination for Employer's Convenience (Sub-Clause 15.5)	Item	
144	Valuation after Termination for Employer's Convenience (Sub-Clause 15.6)	Item	
145	Payment after Termination for Employer's Convenience (Sub-Clause 15.7)	Item	
	Carried Forward		R
	Section No. 1 Bill No. 1 Preliminaries and General		

	Brought Forward		R	
	<u>SUSPENSION AND TERMINATION BY CONTRACTOR (Clause 16)</u>			
146	Suspension by Contractor (Sub-Clause 16.1)	Item		
147	Termination by Contractor (Sub-Clause 16.2)	Item		
148	Contractor's Obligations After Termination (Sub-Clause 16.3)	Item		
149	Payment after Termination by Contractor (Sub-Clause 16.4)	Item		
	<u>RISK AND RESPONSIBILITY (Clause 17)</u>			
150	Responsibilities for Care of the Works (Sub-Clause 17.1)	Item		
151	Liability for Care of the Works (Sub-Clause 17.2)	Item		
152	Intellectual and Industrial Property Rights (Sub-Clause 17.3)	Item		
153	Indemnities by Contractor (Sub-Clause 17.4)	Item		
154	Indemnities by Employer (Sub-Clause 17.5)	Item		
155	Shared Indemnities (Sub-Clause 17.6)	Item		
	<u>EXCEPTIONAL EVENTS (Clause 18)</u>			
156	Exceptional Events (Sub-Clause 18.1)	Item		
	<u>Cost of Force Majeure</u>			
	Should an event of "Force Majeure" occur which affects the progress of the Works, each of the Parties shall bear his own costs insofar as such costs are not covered by insurance in terms of the Contract.			
157	Notice of an Exceptional Events (Sub-Clause 18.2)	Item		
158	Duty to Minimise Delay(Sub-Clause 18.3)	Item		
	Carried Forward		R	
	Section No. 1			
	Bill No. 1			
	Preliminaries and General			

	Brought Forward		R	
159	Consequences of an Exceptional Event (Sub-Clause 18.4)	Item		
160	Optional Termination (Sub-Clause 18.5: additional)	Item		
161	Release from Performance under the Law (Sub-Clause 18.6: additional)	Item		
	<u>INSURANCE (Clause 19)</u>			
162	General Requirements (Sub-Clause 19.1)	Item		
	<u>Insurance for Works and Contractor's Equipment</u>			
	<u>The insuring Party shall be the Contractor.</u>			
	<u>The insured amount shall be TBC including value added tax.</u>			
	<u>The policy deductible shall not exceed TBC including value added tax.</u>			
	<u>The Contractor shall be responsible for the policy deductibles other than where a claim against the insurance is due to default of the Employer, the Employer's employees and/or agents and those for whose actions they are responsible.</u>			
163	Insurance to be provided by the Contractor (Sub-Clause 19.2)	Item		
	<u>Insurance against Injury to Persons and Damage to Property</u>			
	<u>The insured amount shall be R10,000,000.00 including value added tax.</u>			
	<u>The policy deductible shall not exceed TBC including value added tax.</u>			
	<u>The Contractor shall be responsible for the policy deductibles other than where a claim against the insurance is due to default of the Employer, the Employer's employees and/or agents and those for whose actions they are responsible.</u>			
	Carried Forward		R	
	Section No. 1			
	Bill No. 1			
	Preliminaries and General			

	Brought Forward		R
	<u>Insurance for Removal of Lateral Support</u>		
	<u>The insuring Party shall be the Employer</u>		
	<u>The insured amount shall be N/A including value added tax.</u>		
	<u>The policy deductible shall not exceed N/A including value added tax.</u>		
	<u>The Contractor shall be responsible for the policy deductibles other than where a claim against the insurance is due to default of the Employer, the Employer's employees and/or agents and those for whose actions they are responsible.</u>		
	<u>EMPLOYER'S AND CONTRACTOR'S CLAIMS (Clause 20)</u>		
164	Claims (Sub-Clause 20.1)	Item	
165	Claims For Payment and/or EOT (Sub-Clause 20.2)	Item	
	<u>DISPUTES AND ARBITRATION (Clause 21)</u>		
166	Constitution of the DAAB (Sub-Clause 21.1)	Item	
	Dispute Adjudication Board is not to be appointed and stipulate such in the Appendix to Tender.		
167	Failure to Appoint DAAB Member(s) (Sub-Clause 21.2)	Item	
	Dispute Adjudication Board is not to be appointed and stipulate such in the Appendix to Tender.		
168	Avoidance of Disputes (Sub-Clause 21.3)	Item	
	Dispute Adjudication Board is not to be appointed and stipulate such in the Appendix to Tender.		
169	Obtaining DAAB'S Decision (Sub-Clause 21.4)	Item	
170	Amicable settlement (Sub-Clause 21.5)	Item	
171	Arbitration (Sub-Clause 21.6)	Item	
	Carried Forward		R
	Section No. 1		
	Bill No. 1		
	Preliminaries and General		

	Brought Forward		R
	<u>SECTION B: SPECIFICATION</u>		
172	<u>Protection of Trees</u>	Item	
	Trees and shrubs shall not be removed, cut back or disturbed in any way without the consent of the Engineer.		
173	<u>Shop Drawings</u>	Item	
	Shop drawings are drawings, diagrams, designs, illustrations, schedules, performance charts, brochures, setting out drawings, shop details and other data which are prepared by the Contractor, Subcontractor, manufacturer, supplier or distributor which illustrate manufacturing details and methods of execution of work.		
	Only shop drawings and/or samples submitted for review shall be considered by the Engineer. The Engineer's approval of shop drawings and/or samples shall be limited to checking for general conformity with design and specification and shall not alter the design responsibilities in terms of the Contract. The Engineer may refer shop drawings and/or samples for approval to the relevant professional consultant who has delegated authority.		
	Where shop drawings are called for:		
	(a) the Contractor shall:		
	(i) prepare or ensure that a Subcontractor, manufacturer, supplier or distributor prepares shop drawings at their own expense,		
	(ii) submit sufficient copies of shop drawings to the Engineer for approval,		
	(iii) allow the Engineer reasonable time to approve shop drawings,		
	(iv) keep a record of all shop drawings submitted to the Engineer,		
	(v) ensure that shop drawings conform to the dimensions of built work,		
	Carried Forward		R
	Section No. 1		
	Bill No. 1		
	Preliminaries and General		

	Brought Forward		R
	<p>(vi) submit sufficient copies of the approved shop drawings to the Engineer for his use and for use in the Works,</p> <p>(vii) ensure that work is not executed from shop drawings that have not been approved by the Engineer, and</p> <p>(viii) not be entitled to payment for Materials (for example steel roof truss components such as gussets, connection plates and the like) of which shop drawings may have been approved by the Engineer and/or the relevant professional consultant who has delegated authority but which are in excess of the design parameters stipulated by such professional consultant. Payment shall be based on the design parameters stipulated by the relevant professional consultant.</p> <p>(b) The Engineer shall:</p> <p>(i) check timeously the shop drawings submitted by the Contractor, and</p> <p>(ii) advise the Contractor whether shop drawings are approved or are to be resubmitted.</p>		
174	<u>As-built Drawings</u>	Item	
	<p>The Contractor shall provide the Engineer with "as-built" Drawings or information for the preparation of "as-built" Drawings as required by the Engineer and indicating inter alia the following:</p> <p>(a) service routings for all services,</p> <p>(b) junctions in service routings, and</p> <p>(c) salient features for the operation and maintenance of the services.</p>		
175	<u>Alcoholic Liquor or Drugs</u>	Item	
	Carried Forward		R
	<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries and General</p>		

	Brought Forward		R	
	The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal by Contractor's Personnel.			
176	<u>Arms and Ammunition</u>	Item		
	The Contractor shall not give, barter or otherwise dispose of to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.			
177	<u>Festivals and Religious Customs</u>	Item		
	The Contractor shall respect the Country's recognised festivals, days of rest and religious or other customs.			
178	<u>Proprietary Branded Products</u>	Item		
	The Contractor shall take delivery of, handle, store, use, apply and/or fix all proprietary branded products in strict accordance with the manufacturer's instructions after consultation with the manufacturer's authorised representative.			
179	<u>Similar products</u>	Item		
	Upon written approval from the Engineer the Contractor may substitute proprietary branded products with other similar products if:			
	(a) a similar product is manufactured in the Country,			
	(b) the products are similar in quality and appearance to the product specified,			
	(c) the cost of the similar products is equal to or lower than the product specified, and			
	(d) the similar product is aesthetically acceptable to the Engineer.			
	The substitution of a proprietary branded product with a similar product approved by the Engineer shall constitute a Variation and the Contract Price shall be adjusted accordingly.			
	Carried Forward		R	
	Section No. 1 Bill No. 1 Preliminaries and General			

	Brought Forward		R
180	<p><u>Vermin</u></p> <p>The Contractor shall take all necessary precautions to keep the Works and the Site free from vermin and shall leave the Works vermin-free on completion.</p>	Item	
181	<p><u>Overloading</u></p> <p>The Contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the Works or temporary works e.g. scaffolding, etc. The Contractor shall submit details of his proposed loading, storage, plant erection, etc. to the Engineer for approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the Engineer's requirements in connection with the provision of temporary support work, etc. Any damage caused to the Works by overloading shall be made good by the Contractor at his expense.</p>	Item	
182	<p><u>Propping of Floors Below</u></p> <p>The Contractor is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of Plant, Materials, Contractor's Equipment and the like. The location of these areas and any necessary propping shall be approved by the Engineer and the cost thereof shall be borne by the Contractor.</p> <p>Insert the provisions called for by the relevant green star consultant should it be a requirement that the project be submitted for green star certification.</p>	Item	
183	<p><u>Overhand Work</u></p> <p>No provision has been made for overhand work. Where necessary, the Contractor shall make his own arrangements with the owners of adjoining properties to execute such work.</p>	Item	
184	<p><u>Warranties for Materials and Workmanship</u></p>	Item	
	Carried Forward		R
Section No. 1 Bill No. 1 Preliminaries and General			

	Brought Forward		R
	<p>Where warranties for Materials and/or workmanship are called for, the Contractor shall obtain a written warranty, addressed to the Employer, from the entity supplying the Materials and/or doing the work and shall deliver same to the Engineer on final completion of the Contract.</p> <p>The warranty shall state that workmanship, Materials and installation are warranted for a specific period from the date of the issue of the Taking-Over Certificate and that any defects that may arise during the specified period shall be made good at the expense of the entity supplying the Materials and/or doing the work, upon written notice to do so.</p> <p>The warranty will not be enforced if the work is damaged by defects in the execution of the Works, in which case the responsibility for replacement shall rest entirely with the Contractor.</p>		
185	<p><u>Electricity, Water and Gas and Temporary Services</u></p> <p><u>Temporary Services</u></p> <p><u>The Contractor is to make his own arrangements for electricity, water, gas, telecommunications and temporary ablutions for Contractor's Personnel and others.</u></p> <p>The Contractor shall make all necessary temporary connections and shall remove same and the temporary ablutions by the date of the issue of the Taking-Over Certificate for the Works.</p> <p><u>Electricity Supply</u></p> <p><u>The Contractor may connect to the existing electricity supply at approved points, supply and install meters and execute necessary temporary work and shall remove same by the date of issue of the Taking-Over Certificate for the Works. The Employer shall meter the consumption which the Contractor shall be responsible for.</u></p> <p><u>The Employer does not warrant that any electrical supply that may exist is adequate for the proper execution of the Works.</u></p>	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 Preliminaries and General</p>		

186	Brought Forward		R
	<u>Employer's Equipment and Free-Issue Material</u> The Contractor shall be liable for excessive use of free-issue material or Plant supplied by the Employer. Such free-issue material or Plant actually installed in the Works shall be reconciled against the free-issue material or Plant supplied to the Contractor and the Contractor shall be liable for any shortfall, taking into account the industry acceptable wastage for such material.	Item	
	Carried to Final Summary		R
Section No. 1 Bill No. 1 Preliminaries and General			

Item No	Quantity	Rate	Amount
<u>SECTION 2</u>			
<u>BILL NO. 1</u>			
<u>ALTERATIONS (PROVISIONAL)</u>			
<u>PREAMBLES</u>			
<p>The General Preambles for Trades (2017 edition), as published by the Association of South African Quantity Surveyors, shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items, fully described in the said General Preambles, will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>View site:</u>			
<p>Before submitting his tender, the Contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished.</p> <p>No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained</p>			
<u>Old materials to become property of the Contractor:</u>			
<p>Old materials from alterations, except where described as to be re-used or handed over, become the property of the Contractor.</p>			
Carried Forward		R	
Section No. 2 Bill No. 1 Alterations (Provisional)			

<p style="text-align: right;">Brought Forward</p> <p><u>Old materials to be carted away:</u></p> <p>Old materials from the alterations, except where described as to be re-used or handed over, as well as all rubbish, etc must be regularly carted from the site and not be allowed to accumulate on or around the site</p> <p><u>Old materials to be re-used:</u></p> <p>None of the old materials are to be used for new work, except where specifically described as being set aside for re-use</p> <p><u>Handing over of materials:</u></p> <p>Where certain materials or articles from demolitions or alterations are described as to be "handed over to the Employer", it shall be taken to mean "handed over by the Contractor to the Principal Agent" and such materials or articles shall be properly stored by the Contractor until handing over thereof and shall include all necessary transport</p> <p>The Contractor must obtain an official receipt from the Principal Agent listing the materials or articles and dates of handing over</p> <p>Should the Contractor fail to submit the receipt when requested to do so, it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Employer for the full replacement value thereof, which amount will be deducted from any monies due to the Contractor</p> <p><u>Explosives:</u></p> <p>No explosives whatsoever may be used for demolition purposes, unless otherwise stated</p> <p><u>GENERAL</u></p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 2 Bill No. 1 Alterations (Provisional)</p>		R	

<p style="text-align: center;">Brought Forward</p> <p><u>The contractor shall carry out the whole of the work with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide and erect any temporary tarpaulins and temporary plumbing that may be necessary during the progress of the works, all to the satisfaction of the Architect, and remove when directed.</u></p> <p><u>Any water supplies pipes and other piping that may be met with and found necessary to disconnect or cut, shall be effectually stopped or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the Architect.</u></p> <p><u>Doors, fanlights, fittings, frames, linings, etc shall be thoroughly overhauled before re-fixing including taking off, easing and re-hanging, cramping up, re-wedging as required and making good cramps, dowels, etc and easing, oiling, adjusting and repairing ironmongery if necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted wood to match timber.</u></p> <p><u>Where doors, windows, etc are described as taken out this shall be understood to include for removal of all beads, architraves, ironmongery, etc and doors which are re-fixed are to be provided with new architraves (elsewhere measured).</u></p> <p><u>Prices for taking out and removing doors and frames shall include for removing door stops, cabin locks, etc and making good to match existing.</u></p> <p><u>With regard to building up openings in existing walls, cement screeds and pavings, granolithic, etc, shall be levelled and prepared for raising of brickwork.</u></p> <p><u>Allow for making good all existing plastered walls where damaged by furniture, etc, and stopping up all screw and holes before painting.</u></p> <p><u>Making good finishes shall be deemed to include making good of the brick and concrete surfaces onto which new finishes are applied, where necessary.</u></p>		R	
<p style="text-align: center;">Carried Forward</p> <p>Section No. 2 Bill No. 1 Alterations (Provisional)</p>		R	

Brought Forward				R
<p><u>The contractor will be required to take all dimensions affecting existing building on the site and he will be held solely responsible for the accuracy of all such dimensions.</u></p> <p><u>Hazardous materials:</u></p> <p>Demolitions of buildings, services, external works, site services, etc are to include for the safe removal and disposal of asbestos or asbestos products or other hazardous materials by approved Registered Specialists</p> <p><u>TEMPORARY BARRIERS, SCREENS, ETC</u></p> <p><u>Temporary barriers, screens, etc including removal:</u></p>				
1	Dust screen 3000mm high formed of suitable timber framing with 250 micron polyethylene sheeting stapled on including corners, ends, etc. to be used on all the phases of the construction project and in accordance to the Health and Safety specifications and regulations	m	300	
<u>REMOVAL OF EXISTING WORK</u>				
<u>Demolishing and removing:</u>				
2	1000mm high Steel Bollards	No	3	
<u>Taking out/off and removing 4mm bituminous waterproofing</u>				
3	<u>4mm bituminous waterproofing</u>	m2	10,000	
<u>MAKING GOOD OF FINISHES, ETC</u>				
<u>Making good concrete:</u>				
4	Floors in patches	m2	1,000	
Carried Forward				R
Section No. 2 Bill No. 1 Alterations (Provisional)				

Brought Forward		R	
<u>MECHANICAL EQUIPMENT</u>			
<u>The following equipment shall be isolated, disconnected, removed and handed over to the Employer:</u>			
Decommissioning and stripping of existing mechanical installations including cables, machinery, control devices, over an area of approximately 3000m ² at 99 steps rooftop building	Item		
<u>TESTING</u>			
Conduct a concrete integrity test on an existing concrete roof approximately 10,000m ² as directed and approved by the Engineer. Make good after testing.	Item		
Carried Forward to Summary of Section No. 2		R	
Section No. 2			
Bill No. 1			
Alterations (Provisional)			

Item No	Quantity	Rate	Amount
<u>SECTION 2</u>			
<u>BILL NO. 2</u>			
<u>WATERPROOFING</u>			
<u>PREAMBLES</u>			
The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained			
The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Waterproofing:</u>			
Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets, etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs			
<u>WATERPROOFING TO ROOFS, BASEMENTS, ETC</u>			
<u>4mm "Derbigum SP" waterproofing</u>			
1	On flat roofs	m2	10,000
<u>PROTECTIVE ROOFING PAINT</u>			
<u>Two coats "Silvakote" bituminous aluminium paint</u>			
2	On waterproofing to roofs	m2	10,000
Carried Forward to Summary of Section No. 2			R
Section No. 2			
Bill No. 2			
Waterproofing			

Item No	Quantity	Rate	Amount
<u>SECTION 2</u>			
<u>BILL NO. 3</u>			
<u>CARPENTRY AND JOINERY</u>			
<u>PREAMBLES</u>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Fixing:</u>			
<p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p> <p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given separately elsewhere</p>			
<u>Joinery:</u>			
<p>Descriptions of frames shall be deemed to include frames, transomes, rails, etc</p> <p>Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts</p>			
Carried Forward		R	
Section No. 2 Bill No. 3 Carpentry and Joinery			

Brought Forward		R	
<p><u>Particle board</u></p> <p>All particle board shall comply with SANS 50312 having the required marking as per SANS 50312/EN 312</p> <p><u>Decorative thermosetting plastic laminate covering:</u></p> <p>Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish</p> <p><u>Sizes:</u></p> <p>Sizes are nominal and the Contractor shall make allowance in his prices for minor variances in stated finished sizes of timber doors, door members, door frames, architraves, etc</p> <p><u>Prices</u></p> <p>Prices for all joinery work are to include for general framing, housing and notching, arris rounded angles, glueing, blocking, planting on, screwing, adhesives, dowels, pellets, cross tongues, screws and nails and setting up complete and also for all square cutting and waste. Tops shall be secured with metal or hardwood buttons.</p> <p><u>DOORS</u></p> <p><u>Heavy duty timber anti-bandit door with galvanised mild steel pressed metal frame (elsewhere measured) to suit door:</u></p>			
1	44mm Door 1800 x 2400mm high finished with galvanised steel panels including control system.	No	1
<p>Carried Forward to Summary of Section No. 2</p> <p>Section No. 2 Bill No. 3 Carpentry and Joinery</p>		R	

SECTION SUMMARY - Building Works		Page No	Amount	
Bill No				
1	Alterations (Provisional)	53		
2	Waterproofing	54		
3	Carpentry and Joinery	56		
Section No. 2			R	
Carried to Final Summary				

Item No		Quantity	Rate	Amount
	<u>SECTION 3</u>			
	<u>BILL NO. 1</u>			
	<u>EXTERNAL WORK (PROVISIONAL)</u>			
	<u>(ALL TRADES)</u>			
	<u>PREAMBLES</u>			
	<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Nature of ground:</u>			
	<p>The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"</p> <p>The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"</p> <p>The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, all of which will be deemed as "earth", but possibly interspersed with "hard rock"</p> <p>Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth"</p>			
	Carried Forward		R	
	Section No. 3			
	Bill No. 1			
	External Works (Provisional)			

<p style="text-align: right;">Brought Forward</p> <p>A soils investigation has been carried out on the site by the Engineer and the report is annexed to these bills of quantities. The soils report indicates that the ground varies between transported soils at surface comprising gravel layers of varying thickness and interspersed with clay, and weathered shales varying from very soft rock to medium hard rock consistency, all of which will be deemed as "earth". All very hard unweathered shale, ironstone, etc the removal of which necessitates the use of explosives or heavy duty hydraulic percussion hammers (peckers), will be classified as "hard rock"</p> <p>Should the Contractor encounter any "soft" or "hard" rock in the excavations, he shall immediately notify the Engineer who shall be the sole arbiter as to what constitutes "soft" or "hard" rock for final account purposes</p> <p><u>Subterranean water:</u></p> <p>No subterranean water is expected</p> <p><u>Excavation for working space in rock:</u></p> <p>Notwithstanding clause 11 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be</p> <p><u>Carting away of excavated material:</u></p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p> <p><u>Filling:</u></p> <p>Notwithstanding the reference to prescribed multiple handling in Clause 1 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material</p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 3 Bill No. 1 External Works (Provisional)</p>		R	

Brought Forward			R
<u>Testing:</u>			
<i>Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D</i>			
<u>DEMOLITIONS, ETC</u>			
<u>Breaking up and removing:</u>			
1	150mm Thick mesh reinforced concrete surface beds, paving, etc.	m2	15
<u>Bases</u>			
<u>CONCRETE WORK</u>			
<u>25MPa/19mm reinforced concrete:</u>			
	Bases	m3	14
<u>Test cubes</u>			
2	Making and testing sets of three 150 x 150 x 150mm concrete strength test cubes (Provisional)	Sets	5
<u>Finishing top surfaces of concrete smooth with a steel trowel:</u>			
3	Surface beds, slabs, etc to falls	m2	1,109
<u>FORMWORK</u>			
<u>Smooth formwork to sides:</u>			
4	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	5,544
<u>REINFORCEMENT</u>			
<u>Fabric reinforcement:</u>			
5	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	416
Carried Forward			R
Section No. 3 Bill No. 1 External Works (Provisional)			

Brought Forward			R
<u>FENCING</u>			
<p><u>Black high density security galvanised mesh fence with min 3.15mm horizontal wire diameter and 4mm vertical wire diameter. Panels: Appertures to be 76x12mm inner and min 3050mm wide panels to be reinforced with 4x 50mm V formation horizontal recessed bands. Height above the ground to be min 2100mm. All fixtures to be on the inside of the fence line. Panel to be fixed over 48 line wires with Double and single bolt clamps using Anti Vandal bolts.</u></p> <p><u>Posts to be bolted into ex.concrete and must have moisture proof caps for all posts. Pending on the security risk area; a) Razor mesh panels 600mm high b) Shark tooth spike rails and or c) 100mm Castle type spike rails can be installed on top of mesh. Posts to be 85mm width which includes Locking recess mechanism, posts to be sealed with UV stabilized polymer cap and post to be Hot Dipped galvanized. A 10 year underwritten Anti - Corrosion Guarantee life span to be provided. Product to comply with SANS 10244-2:2003 ISO 1461 hot dip galvanising. Any fixing work to be certified by an engineer.</u></p> <p><u>BASE PLATE with 4 x holes to accommodate fixing with gussets coating galvanised then marine fusion bond coated.</u></p>			
6	Security fence 2100mm high	m	210
7	Security fence 3000mm high	m	20
Carried to Final Summary			R
Section No. 3 Bill No. 1 External Works (Provisional)			

Item No	Quantity	Rate	Amount
<u>SECTION NO. 4</u>			
<u>BILL NO. 1</u>			
<u>ELECTRICAL INSTALLATIONS</u>			
<u>DISCONNECTION/ REMOVAL OF REDUNDANT ELECTRICAL EQUIPMENT</u>			
<u>The following equipment shall be isolated, disconnected, removed and handed over to the Employer:</u>			
1	Decommissioning and isolate existing cable from the Main feeder DB. Rate to include removal of 2x240mm2-core cables.	SUM	
2	Decommissioning and isolate existing cable from the Regional office DB. Rate to include removal of 2x240mm2-core cables.	SUM	
3	Switch OFF power for the above isolation cables	SUM	
4	Switch power ON for the new cables for the new system	SUM	
<u>LOW VOLTAGE</u>			
<u>LV SWITCHGEAR</u>			
<u>DBs and LV Switchgear</u>			
<u>Manufacture, deliver to site, install, commission, test kiosks, distribution boards as per technical specification document and single line diagram, to be housed in electrical. All electrical panels shall be stainless steel material, rates to include powder coated, busbars and drilling, busbar connections internal wiring etc. Refer to single line diagram for electrical panel colour</u>			
5	DB - Lighting 99-Steps	No 1	
6	DB - Plant room	No 1	
Carried Forward			R
Section No. 4 Bill No. 1 Electrical Installation			

PASSENGER RAIL AGENCY OF SOUTH AFRICA
 BID NUMBER: HO/CRES/DBN/ENERGY/2/8/2024
 1000KWP PHOTOVOLTAIC SOLAR ROOFTOP
 DURBAN STATION

Brought Forward			R
<u>CABLES</u>			
<u>Supply, deliver to site cables and conductors as specified. Install, rack, strap and testing of cables as per technical specification document including clamps, ties and cable numbering system</u>			
7	2,5mm conductors (mixed colours - live, neutral and earth)	m 600	
8	4,0mm conductors (mixed colours - live, neutral and earth)	m 600	
9	2.5 mm ² 2c 600/1000V PVC/SWA/PVC ECC Cu Cable	m 1	Rate only
10	2.5 mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	m 400	
11	6,0 mm ² 2c 600/1000V PVC/SWA/PVC ECC Cu Cable	m 1	Rate Only
12	25mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	m 400	
13	50mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	m 100	
14	70mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	m 1	Rate Only
15	95mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	m 400	
16	300mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	m 2,000	
17	6,0mm ² - 1 core insulated earth conductor	m 5,000	
18	16mm ² - 1 core insulated earth conductor	m 200	
19	70mm ² - 1 core insulated earth conductor	m 200	
Carried Forward			R
Section No. 4 Bill No. 1 Electrical Installation			

Brought Forward				R
<u>CABLE TERMINATIONS</u>				
<u>Termination of cables shall include supply installation and testing of the glands with corrosion guard, making-off the cable, lugs, and fitting the gland to the board gland plate, switchgear or equipment and final connection of cable tails into board or terminals. Include for Reducing Glands and shrouds where applicable. NB: IP65 Glands are to be used where applicable.</u>				
20	2.5 mm ² 2c 600/1000V PVC/SWA/PVC ECC Cu Cable	No	12	
21	2.5 mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	No	20	
22	25mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	No	24	
23	50mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	No	10	
24	70mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	No	1	Rate Only
25	95mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	No	8	
26	300mm ² 4c 600/1000V PVC/SWA/PVC ECC Cu Cable	No	12	
27	6mm ² - 1 core insulated earth conductor	No	90	
28	16mm ² - 1 core insulated earth conductor	No	50	
29	70mm ² - 1 core insulated earth conductor	No	50	
Carried Forward				R
Section No. 4 Bill No. 1 Electrical Installation				

Brought Forward			R
<u>CABLE TRAY, LADDER, TRUNKING, POWER SKIRTING, CONDUIT AND ACCESSORIES</u>			
<u>Supply, deliver to site unpainted hot dipped galvanised steel cable tray, cable ladder as specified heavy duty range, inclusive of all items required to install in accordance with manufacturers specification. Power skirting and shall be PVC as per line item below. Rate to include all necessary required accessories for a complete installation.</u>			
<u>Supply, deliver and Install hot dip galvanised heavy duty all items such as brackets, rawl bolts, splices, bonding straps etc. required to install in accordance with manufacturers specification. NB: all additional HDG steel supports to be included in the rates.</u>			
30	300mm wide tray - Cable ladder complete with all required accessories.	No	300
31	Cable ladder bends Tee ways complete with all required accessories.	No	60
32	300mm wide heavy duty tray - Cable tray complete with all required accessories.	m	1,000
33	Cable tray Heavy duty 4-ways complete with accessories	No	40
34	Cable tray bends Heavy duty - 90 degree bends complete with accessories	No	60
35	Cable tray heavy duty bends Tee ways complete with all required accessories.	No	60
<u>LV CABLE STEEL CHANNEL - P2000</u>			
36	Supply, deliver to site, store & install P2000 trunking hot dip galvanised inclusive of all items required to install in accordance with manufacturers specification. Rate must be inclusive of all items such as brackets, raw bolts, splices, bonding straps, trunking cover etc. required to install in accordance with manufacturers specification.	m	400
Carried Forward			R
Section No. 4 Bill No. 1 Electrical Installation			

Brought Forward			R
<u>LV CABLE STEEL CHANNEL - P9000</u>			
37	Supply, deliver to site, store & install P9000 trunking hot dip galvanised inclusive of all items required to install in accordance with manufacturers specification. Rate must be inclusive of all items such as brackets, raw bolts, splices, bonding straps, trunking cover etc. required to install in accordance with manufacturers specification.	m	2,600
<u>LIGHT SWITCHES, SOCKET OUTLET, WELDING ISOLATORS AND ACCESSORIES</u>			
<u>Supply, deliver and installation of the following control devices and accessories as per technical specification document. Rate must allow for the termination and connecting of the PVC conductor to the accessory, fixing to the conduit box and the fitting of the cover plate. (PVC covers)</u>			
38	Supply and installation Surface mounted weather-proof of 20Amp IP65, 1 lever, 1-way, light circuit switch complete with cover and all accessories	No	4
39	Supply and install 16A, 3pin, 2pin 230V Surface Mounted Switched Socket Outlets, white coloured plate with red toggle	No	8
40	Supply, deliver and installation of 400V, 32A, 4-pole IP65 rated surface mounted Isolator, with red toggle / red plate coloured, complete with all necessary accessories	No	12
41	Supply, deliver and installation of 400V, 32A, 2-pole IP65 rated surface mounted Isolator, with red toggle / red plate coloured, complete with all necessary accessories	No	6
42	Supply and installation of 20Amp, 2-pole 230V surface mounted solator IP65 red coloured/red toggle, complete with all necessary accessories	No	12
43	25mm PVC conduit, chased on wall, make good, complete with cover and all necessary accessories.	m	1
44	25mm steel conduit / bosal surface mounted complete with cover and all necessary accessories.	m	600
Carried Forward			R
Section No. 4 Bill No. 1 Electrical Installation			

Rate Only

	Brought Forward			R	
45	32mm steel conduit / bosal surface mounted complete with cover and all necessary accessories.	m	210		
	<u>LUMINARIES AND CONTROL DEVICES</u>				
	<u>Supply, deliver and install the following luminaires, complete with lamps and control gear as per specification. See and refer to the technical specification document for details of each luminaire.</u>				
46	Type A5 - Refer to technical specification document for detailed specification.	No	12		
47	Type A6 - Refer to technical specification document for detailed specification.	No	6		
48	Type C6. Refer to technical specification document for detailed specification.	No	12		
	<u>SUNDRIES</u>				
49	Labelling of light switches, sockets and isolators outlets as per drawing pop riveted to cover plate.			SUM	
50	Signs, Labels & Equipment Tags Supply and install all power, lighting, motors and earthing signs, labels and equipment tags as specified and in accordance with all Statutory requirements.			SUM	
51	EARTH BAR - A 500 mm x 20mm x4mm copper earth bar with 10no. 6 mm diameter holes pre-drilled, surface fixed on insulators	No	10		
52	Supply, deliver, installation and terminate conductors of Copper earth spike 1,2m, install in ground for earthing purpose. Rate to include termination of conductors.	No	25		
53	Installation of load recorders for 4 weeks on the load distribution board. Main breaker is 1600A, 3-phase. thereafter submit report/results.			SUM	
54	Meter readers - 3 Phase energy logger, energy analyser, electrical network analyser. Energy meter including analysis templates.	No	2		
	Carried Forward			R	
	Section No. 4 Bill No. 1 Electrical Installation				

		Brought Forward			R	
		<u>EXCAVATIONS</u>				
		<u>Trenching shall be calculated using the formula below: (700mm deep * 0.5m wide * length)</u>				
55	Excavate in concrete/tar and hard soil, backfilling and compaction to 93% MOD AASHTO and re-instate tar / concrete	m3	35			
		<u>CABLE SLEEVES</u>				
		<u>Supply, deliver and install the following UPVC flexible black & green ring sleeves. All material to be SABS approved as suitable for cable installation. Must have 1,5mm draw wire.</u>				
56	160 mm UPVC Flexible sleeves	m	20			
57	110 mm UPVC Flexible sleeves	m	20			
58	75 mm UPVC Flexible sleeves (green sleeves)	m	1			Rate Only
		<u>PHOTOVOLTAIC SOLAR SYSTEM</u>				
		<u>Supply, deliver, accept and install the following solar system equipment, complete with control gear supporting structure. Refer to the technical specification document for details.</u>				
59	Photovoltaic Modules / solar panels - 650W, Grade A Tier 1 panels as per technical specification document.	No	1,540			
60	Individual testing of all panels and issue certificates to guarantee the objective plant performance of 1000KWP				SUM	
61	DC Combiner box (each with 8 strings per DC DB) complete with 30A DC Fuse, 25A DC Main switch per string and surge arrestor and all necessary accessories for complete installation and operation	No	10			
62	Solar Inverters - 250kW complete with all required accessories for complete installation and operation refer to technical specification document.	No	4			
		Carried Forward			R	
	Section No. 4 Bill No. 1 Electrical Installation					

PASSENGER RAIL AGENCY OF SOUTH AFRICA
BID NUMBER: HO/CRES/DBN/ENERGY/2/8/2024
1000KWP PHOTOVOLTAIC SOLAR ROOFTOP
DURBAN STATION

	Brought Forward			R
63	Control panel 500kW complete with all required accessories for complete installation and operation. Refer to technical specification document for details.	No	2	
64	Control panel 1000kW complete with all required accessories for complete installation and operation. Refer to technical specification document.	No	2	
65	Supply and install of aluminium structural frames covering an area of approximately 10,000m ² for number of 1,540 solar panels including concrete bases, clips and all required accessories (refer to DWG1040 - 004 - 2000 PV ROOF SOLAR PANELS REV2)			SUM
66	Lithium-Ion Battery bank energy storage backup 2-hours (for 1MW plant) including shipping steel container approximately 6m x 12m installed on site, refer to technical specification document.			SUM
67	MC4 Male and Female PV connector	No	1,000	
68	6mm ² PV Flexible cable Black	m	12,000	
69	6mm ² PV Flexible cable Red	m	12,000	
70	YT5 Trunking 3 meters			SUM
71	YT2 Trunking 3 meters			SUM
72	25mm ² Battery cable Red	m	2,600	
73	25mm ² Battery cable Black	m	2,600	
74	Energy management system / controls including an on-line monitoring platform. For the Durban and Umjansthi(Johannesburg) offices as per technical specification document.			SUM
75	Digital kW meters with comm cables and CTs for all PV system plants (Refer to technical specification document).			SUM
76	Training of ten PRASA team members at an accredited SAPVIA endorsed training institute for the PV Solar GreenCard course.	No	10	
	Carried Forward			R
	Section No. 4			
	Bill No. 1			
	Electrical Installation			

PASSENGER RAIL AGENCY OF SOUTH AFRICA
BID NUMBER: HO/CRES/DBN/ENERGY/2/8/2024
1000KWP PHOTOVOLTAIC SOLAR ROOFTOP
DURBAN STATION

	Brought Forward		R
77	Provide close out pack including all operational and maintenance manuals, As Built drawings, monitoring and sign off. These shall be three hard copies and one soft copy on USB.		SUM
78	Service and Maintenance for 36 months of the entire PV Solar system and electrical infrastructure. Rates shall include all necessary costs such as travelling, labour, tools, etc as indicated on the works information document. Solar plant system maintenance as indicated on the technical specification document: Year 1 R Year 2 R Year 3 R For Generator set Generator maintenance as indicated on the technical specification document: Year 1 R Year 2 R Year 3 R		SUM
79	Contractor to liaise with Prasa Electrical team and prepare an Energy Performance Certificate		SUM
80	Budgetary Allowance of Eight Hundred Thousand Rand for Study Tour Program and Factory Accepted Test.	Item	800,000.00
	<u>1,25MVA Containerised Generator set</u>		
81	Supply, delivery, installation of the 1,25MVA, 400V 3CR12, containerised generator set complete with required ancillaries for a complete operation. The set shall include sound attenuator. Rates to include integration with the solar system and normal supply plant. Refer to technical specification document.		SUM
	Carried Forward		R
	Section No. 4 Bill No. 1 Electrical Installation		

Brought Forward					R
<u>TEST AND COMMISSIONING</u>					
<u>Test and commission the complete electrical installation including completion of quality checksheets, Compliance Certificates & test results for the entire electrical installation and submitting them to the Employer's Representative.</u>					
82	Hot and Cold Commissioning				SUM
83	Test and commission the complete electrical installation including Certificates of Compliance & test results to the Engineer.				SUM
<u>ELECTRONICS INSTALLATIONS - SECURITY SYSTEM</u>					
<u>Supply, deliver and installation of the following electronics units for security system in the building and to include all required accessories as per specification. Rate must allow for the termination and connecting fixing testing and commissioning as indicated below. Refer to technical specification document</u>					
<u>BULLET CAMERA - OUTDOOR DOME</u>					
84	Type 1 - 3.0C-H6SL-BO2-IR 3.0 MP, WDR, LightCatcher, Day/Night, Outdoor Bullet Camera, 10.9-29mm f/1.7, Integrated IR including bracket housing and all other required accessories	No	12		
<u>HIGH SPEED PTZ CAMERA, EXTERNAL</u>					
85	Type 2 - 2.0C-H4IRPTZ-DP30-WP 2MP H4 IR PTZ, with Wiper 30X, Self-learning analytics, IK10, IP66, 150m IR	No	4		
86	IRPTZ-MNT-WALL1 Wall arm for use with H4 IR PTZ or H4A-MH-AD-PEND1 on H4/H5 Multisensor	No	4		
87	PTZ keyboard with joystick	No	1		
Carried Forward					R
Section No. 4 Bill No. 1 Electrical Installation					

PASSENGER RAIL AGENCY OF SOUTH AFRICA
BID NUMBER: HO/CRES/DBN/ENERGY/2/8/2024
1000KWP PHOTOVOLTAIC SOLAR ROOFTOP
DURBAN STATION

	Brought Forward			R
88	POE-INJ2-95W-NA Indoor single Port PoE Injector Gigabit, 95W, NA power cord, for use with H4IR PTZ - indoor installation rated. Temperature range of the PoE injector is -10C to +45C. Compatible with power cord with C13 on one side and with country specific plug on the other side.	No	22	
	<u>REMOTE MONITORING STATION</u>			
89	Monitor remote monitoring PC with mouse and keyboard	No	5	
90	Wall mounted 65" LED Full HD monitors	No	8	
91	TV Mounting bracket for above mentioned televisions with all required accessories	No	8	
	<u>NETWORK AND VIDEO RECORDER</u>			
92	NVR Large with NVR support per channel, NVR support per audio input, NVR8 support per audio output, 32 Channel IP Recorders 10TB Usable storage, Network Video recoder	No	1	
93	Storage Manager Licence per Camera	No	16	
94	48 Port Gigabit Switch - Smart PoE	No	1	
95	Network Cabinet 12U Swing Glass Door Wall Mounted 635mm X 600mm X 450mm (HWD)	No	2	
	<u>ACCESS CONTROL</u>			
96	Face, Palm and Fingerprint recognition Terminal with Mask Detection including applicable software and software integration	No	2	
97	Waiver Exit button	No	2	
98	Intelligent Controller, Linux Based with 1 door, 2 inputs and 2 outputs, PoE+ Support, expandable up to 17 doors.	No	2	
99	AC-SW-LIC-REST-6-P Access Control Manager 6 REST Connectivity Software License (per appliance)	No	2	
	Carried Forward			R
	Section No. 4			
	Bill No. 1			
	Electrical Installation			

PASSENGER RAIL AGENCY OF SOUTH AFRICA
BID NUMBER: HO/CRES/DBN/ENERGY/2/8/2024
1000KWP PHOTOVOLTAIC SOLAR ROOFTOP
DURBAN STATION

	Brought Forward			R
100	AC-SW-LIC-VIRDI-BIO-6-P ViRDI BE Manager Integration Software Licenses for suppliers Access Control Manager 6 Professional, Enterprise, Enterprise Plus & Virtual	No	2	
101	AC-LSP-2DR-MER-LCK Two Door Mercury Dual Voltage Integrated Power System supporting two AC- MER-CONT-1DR or one AC-MER-CONT-2DR (Mercury hardware sold separately). The advantage of a dual voltage power supply is the ability to power both Mercury boards and door locks from the same supply. Includes a painted steel enclosure, removable pre drilled back plate, controller standoffs and mounting screws and a 75 watt 12V/2A and 24V/2A power supply-battery charger. The power supply is pre-wired to four Class 2, Power Limited (CL2PL) outputs (C4P Board) delivering a regulated independent power connection to each Mercury board and lock power and control. The power supply features dual outputs (12 & 24volts DC), form 'C' fault relay contacts, a fire alarm input and network interface (interface module sold separately) to enable monitoring, reporting and control of the power system from Access Control Manager (ACM) link. Battery space for two 12V, 8Ah batteries is available in cabinet (unless using two AC-MER-CONT-1DR). Cabinet size: 12" x 14" x 4.5" with door lock and two (2) keys. Weight 14 lb.(LifeSafety Power Part Number: FPO75- B100C4PE1M)	No	2	
102	TOP101 CAT6 UTP Network Cable with UV Protection Jacket	m	8,000	
	<u>SOFTWARE</u>			
103	Application Software interface			SUM
104	Plug in for VMS integration			SUM
105	Babylon integration and configuration			SUM
106	Compile all typed test reports, commissioning data, marked up "as built" drawings, package in plastic covered A4 files and compact discs correctly indexed, and submit to the client.			SUM
	Carried Forward			R
	Section No. 4 Bill No. 1 Electrical Installation			

	Brought Forward			R
	<u>TEST AND COMMISSIONING</u>			
	<u>Test and commission the complete electrical installation including completion of quality checksheets, Compliance Certificates & test results for the entire electrical installation and submitting them to the Employer's Representative.</u>			
107	Test and commission the complete electronics installation including Certificates of Compliance & test results to the Engineer.			SUM
	<u>MAINTENANCE AND WARRANTY</u>			
108	Maintenance and warranty period of the complete installation including equipment, material and workmanship for a period of 12 months from date of completion and handover.	No	12	
	<u>PV SPARE EQUIPMENT LIST</u>			
	<u>Procurement, deliver and storing of spare equipment</u>			
109	Photovoltaic Modules / solar panels - 650W as per specification	No	30	
110	DC Combiner box (each with 8 strings per DC DB) complete with 30A DC Fuse, 25A DC Main switch per string and surge arrestor and all necessary accessories for complete installation and operation	No	2	
111	Solar Inverters - 250kW complete with all required accessories for complete installation and operation	No	1	
112	250kW Lithium-Ion Battery	No	1	
113	6mm ² PV Flexible cable Black	m	2,000	
114	6mm ² PV Flexible cable Red	m	2,000	
	Carried to Final Summary			R
	Section No. 4			
	Bill No. 1			
	Electrical Installation			

Item No		Quantity	Rate	Amount
	<u>SECTION 5</u>			
	<u>BILL NO. 1</u>			
	<u>BUDGETARY ALLOWANCES</u>			
	<u>BUILDING MANAGEMENT SYSTEM SOFTWARE</u>			
1	Budgetary Allowance of Five Hundred Thousand Rand for the installation of building management system software, hardware and related ancillaries	Item		500,000.00
	<u>FIRE PROTECTION</u>			
2	Budgetary Allowance of Five Hundred Thousand Rand for the installation of fire protection.	Item		500,000.00
	<u>DOMESTIC WATER RETICULATION</u>			
3	Budgetary Allowance of Two Hundred Thousand Rand for the installation of domestic water reticulation	Item		200,000.00
	<u>SHIPPING CONTAINER</u>			
4	Budgetary Allowance of One Hundred and Fifty Thousand Rand for shipping container for the storage of batteries	Item		150,000.00
5	Profit (.....%)		%	
6	General attendance (.....%)		%	
	<u>COMMUNITY LIAISON OFFICER</u>			
7	Budgetary Allowance of one One Hundred and Fifty Thousand Rand for community liaison officer	Item		150,000.00
8	Profit (.....%)		%	
9	General attendance (.....%)		%	
	Carried to Final Summary		R	
	Section No. 5			
	Bill No. 1			
	Budgetary Allowances			

[illegible]