



public works  
& infrastructure

Department:  
Public Works and Infrastructure  
**REPUBLIC OF SOUTH AFRICA**

**TENDER NO.: BL 22/008**

## **PROCUREMENT DOCUMENTS**

**FOR**

**BLOEMFONTEIN HIGH COURT: UPGRADING AND  
RENOVATING OF THE ELECTRICAL SYSTEMS  
INCLUDING BACK-UP GENERATOR**

## **VOLUME 3 OF 3: CONTRACT**

### **DEPARTMENT OF PUBLIC WORKS**

Bloemfontein Regional Office  
18 President Brand Street  
Private Bag X20605  
Bloemfontein  
9300

### **ENQUIRIES**

NAME: Mr C. M. Dyantyi  
TEL: 051 408 7366  
REF: 14/2/1/4/18/6706

**NAME OF TENDERER:** \_\_\_\_\_

**CIDB NO.:** \_\_\_\_\_

**CSD NO.:** \_\_\_\_\_

## Part C1: Agreement and Contract Data

## C1.2 Contract Data

## DPW-05: (EC) CONTRACT DATA - (GCC (2010) 2<sup>nd</sup> EDITION: 2010)

<b>Project title:</b>	<b><i>Bloemfontein High Court: Upgrading and Renovating of the Electrical Systems including Back-up Generator</i></b>		
<b>Tender no:</b>	<i>BL 22/008</i>	<b>Reference no:</b>	<i>14/2/1/4/18/6706</i>

	<b>PART 1: DATA PROVIDED BY THE EMPLOYER</b>
	<b>CONDITIONS OF CONTRACT</b>
	<p>The General Conditions of Contract for Construction Works, Second Edition, 2010, published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, is applicable to this Contract and is obtainable from <a href="http://www.saice.org.za">www.saice.org.za</a></p> <p>Bidders to note that materials procured for the works should be from South African manufactures and suppliers. Imported materials shall only be considered under exceptional circumstances, based on compelling technical justifications, and subject to the approval by the NDPWI.</p>

<b>CONTRACT SPECIFIC DATA</b>	
The following contract specific data, referring to the General Conditions of Contract for Construction Works, Second Edition, 2010, are applicable to this Contract:	
<b>CLAUSES</b>	<b>COMPULSORY DATA</b>
1.1.1.8	<p>Amend Clause 1.1.1.8 to include the word “rights” to read as follows:</p> <p>“Contract Data” means the specific data which, together with these General Conditions of Contract, collectively describe the rights, risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract.</p>
1.1.1.13	<p>Amend Clause 1.1.1.13 as follows, clarify when the defects liability period starts:</p> <p>“Defects Liability Period” means the period stated in the Contract Data, commencing on the date indicated on the Certificate of Completion or Certificates of Completion in the event of more than one Certificate of Completion is issued for different parts of the Works, during which the Contractor has both the right and the obligation to make good defects in the materials, Plant and workmanship covered by the Contract.</p> <p>Defects liability period is: <b>12 months</b>.</p>
1.1.1.14 & 5.14.7	<p>The time for achieving Practical Completion of the whole of the works is: <b>20 months</b> measured from the <u>Commencement</u> Date. The time thus stated includes special non-working days and the year-end break.</p> <p><b><u>or, if Practical Completion in portions is required,</u></b></p> <p>The times for achieving Practical Completion for the portions as set out in the Scope of Works are <i>mutatis mutandi</i>:</p> <p>For portion 1 within</p> <p>For portion 2 within</p> <p>For portion 3 within</p> <p>For portion 4 within</p> <p><i>(followed by further portions as required)</i></p>

### Tender no:

Any reference to words “Bid” or Bidder” herein and/or in any other documentation shall be construed to have the same meaning as the words “Tender” or “Tenderer”.

For Internal & External Use

Effective date 1 June 2022

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	The time for achieving Practical Completion of the whole of the Works is: <b>20 months, measured from the Commencement Date. The time thus stated includes special non-working days and the year-end break.</b>
1.1.1.15	The name of the Employer is: <b>The Government of the Republic of South Africa in its Department of Public Works and Infrastructure.</b>
1.1.1.16	The name of the Engineer is: <b>Department of Public Works and Infrastructure</b>
1.1.1.26	The Pricing Strategy is a: <b>Re-measurement Contract.</b>
1.1.1.31	Not applicable to this Contract.
1.1.1.35	Insert the definition of "Value of Works" as Clause 1.1.1.35: "Value of Works" means the value of the Works certified by the Engineer as having been satisfactorily executed and shall include the value of the works done, the value of the materials and/or plant and Contract Price Adjustments.
1.2.1.2	<b>Employer's address:</b>  Physical Address: <b>18 President Brand Street Bloemfontein 9301</b>  Postal Address: <b>Private Bag X20605 Bloemfontein 9300</b>  Facsimile: <b>086 579 4818</b>  Telephone: <b>051 408 7366</b>
	<b>Engineer's address:</b>  Physical Address: <b>Cnr Madiba and Bosman Street Pretoria Central 0001</b>  Postal Address: <b>Private Bag X65 Pretoria 0001</b>  Facsimile: <b>N/A</b>  Telephone: <b>012 492 2153</b>
1.3.4	Not applicable to this Contract.

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1.3.5	<p>Replace Clause 1.3.5 with the following provisions:</p> <ul style="list-style-type: none"> <li>(a) The Employer will become the owner of the information, documents, advice, recommendation and reports collected, furnished and/or compiled by the Contractor during the course of, and for the purposes of executing this Contract, all of which will be handed over to the Employer on request, but in any event on the termination and/or cancellation of this Contract for whatever reason. The Contractor relinquishes its retention or any other rights thereon to which it may be entitled.</li> <li>(b) The copyright of all documents, recommendations and reports compiled by the Contractor during the course of and for the purposes of finalizing the Works will vest in the Employer, and may not be reproduced or distributed or made available to any person outside the Employer's service, or to any institution in any way, without the prior written consent of the Employer. The Employer shall have the right to use such material for any other purpose without the approval of information or payment to the Contractor.</li> <li>(c) The copyright of all electronic aids, software programmes etc. prepared or developed in terms of the Contract shall vest in the Employer, who shall have the right to use such material for any other purpose without the approval of, information or payment to the Contractor.</li> <li>(d) In case of the Contractor providing documents, electronic aids, software programs or like material to the Employer, the development of which has not been at the expense of the Employer, copyright shall not vest in the Employer. The Contractor shall be required to indicate to which documents, electronic aids, software programs or like material this provision applies.</li> <li>(e) The Contractor hereby indemnifies the Employer against any action, claim, damages or legal cost that may be instituted against the Employer on the grounds of an alleged infringement of any copyright, patents or any other intellectual property right in connection with the Works outlined in this Contract.</li> <li>(f) All information, documents, recommendations, programs and reports collected or compiled must be regarded as confidential and may not be communicated or made available to any person outside the Employer's service and may not be published either during the currency of this Contract or after termination thereof without the prior written consent of the Employer.</li> </ul>
3.1.3	<p>1. The Engineer's authority to act and/or to execute functions or duties or to issue instructions are expressly <b>excluded</b> in respect of the following:</p> <ul style="list-style-type: none"> <li>(a) Appointment of nominated Sub-contractors – clause 4.4.3;</li> <li>(b) Granting of an extension of time and/or ruling on claims associated with claims for extension of time – clauses 5.12.3, 10.1.5;</li> <li>(c) Acceleration of the rate of progress and determination of the cost for payment of such acceleration – clause 5.12.4;</li> <li>(d) Rulings on claims and disputes – clauses 10.1.5, 10.2.3 and 10.3.3;</li> <li>(e) Suspension of the Works – clause 5.11.1;</li> <li>(f) Final Payment Certificate – clause 6.10.9;</li> <li>(g) Issuing of <i>mora</i> notices to the Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1;</li> <li>(h) Cancellation of the contract between the Employer and Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1.</li> </ul>

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	<p>2. In order to be legally binding and have legal bearing and consequence, any ruling in respect of the above matters (a) to (h) must be on an official document, signed and issued by the Employer to the Contractor.</p> <p>3. The Contractor must submit claims, demands, notices, notifications, updated particulars and reports in writing, as well as any other supporting documentation pertaining thereto, in respect of any of the above listed matters (a) to (h), to the Engineer within the time periods and in the format(s) as determined in the relevant clauses of the Conditions of Contract. Failing to deliver such to the Engineer timeous and in the correct format will invalidate any claim and the consequences of such failure will <i>mutatis mutandis</i> be as stated in clause 10.1.4.</p> <p>4. Clauses 6.10.9 and 10.1.5 shall be amended as follows to indicate the limitation on the Engineer's authority in respect thereof:</p> <p><b>Clause 6.10.9 – Amend to read as follows:</b></p> <p>Within 14 days of the date of final approval as stated in the Final Approval Certificate, the Contractor shall deliver to the Engineer a final statement claiming final settlement of all moneys due to him (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11, and not yet resolved). The Employer shall within 14 days issue to the Contractor a Final Payment Certificate the amount of which shall be paid to the Contractor within 28 days of the date of such certificate, after which no further payments shall be due to the Contractor (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11 and not yet resolved).</p> <p><b>Clause 10.1.5 – Amend to read as follows:</b></p> <p>Unless otherwise provided in the Contract, the Employer shall, within 28 days after the Contractor has delivered his claim in terms of Clause 10.1.1 as read with Clause 10.1.2, deliver to the Contractor his written and adequately reasoned ruling on the claim (referring specifically to this Clause). The amount thereof, if any, allowed by the Employer shall be included to the credit of the Contractor in the next payment certificate.</p> <p>5. Insert the following under 3.1.3: Provided that, notwithstanding any provisions to the contrary in the Contract, the Employer shall have the right to reverse and, should it deem it necessary, to amend any certificate, instruction, decision or valuation of the Engineer and to issue a new one, and such certificate instruction, decisions or valuations shall for the purposes of the Contract be deemed to be issued by the Engineer, provided that the Contractor shall be remunerated in the normal manner for work executed in good faith in terms of an instruction issued by the Engineer and which has subsequently been rescinded.</p>
3.2.2.1	<p>Amend Clause 3.2.2.1 to insert the word "Plant" to read as follows:</p> <p>Observe the execution of the Works, examine and test material, Plant and workmanship, and receive from the Contractor such information as he shall reasonably require.</p>
3.2.3.2	<p>Amend Clause 3.2.3.2 to insert the word "Plant" to reads as follows:</p> <p>Notwithstanding any authority assigned to him in terms of Clauses 3.2.2 and 3.2.4, failure by the Engineer's Representative to disapprove of any work, workmanship, Plant or materials shall not prejudice the power of the Engineer thereafter to disapprove thereof and exercise any of his powers in terms of the Contract in respect of thereof.</p>
4.8.2.1	<p>Amend Clause 4.8.2.1 to include the word "person", as follows:</p> <p>Makes available to the Employer, or to any such contractor, person or authority, any roads or ways for the maintenance of which the Contractor is responsible, or</p>

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4.8.2.2	Amend Clause 4.8.2.2 to include "Employer" and "contractors", as follows:  Provides any other facility or service of whatsoever nature to the Employer or to any of the said contractors, persons or authorities,
5.3.1	The documentation required before commencement with Works execution are:  Health and Safety Plan (Refer to Clause 4.3) Initial programme (Refer to Clause 5.6) Security (Refer to Clause 6.2) Insurance (Refer to Clause 8.6)
5.3.2	The time to submit the documentation required before commencement with Works execution is: <b>21 days.</b>
5.4.2	The access to, and possession of, the Site referred to in Clause 5.4.1 shall be <b>"not exclusive"</b> to the Contractor. In the event of access to, and possession of, the Site is not exclusive to the Contractor, the following limitations apply:  .
5.8.1	The non-working days are: <b>Saturdays and Sundays</b>  The special non-working days are:  (1) <b>Public Holidays;</b> (2) <b>The year-end break commencing on 16 December until the Sunday preceding the first working Monday of January of the succeeding year.</b>
5.9.1	Amend Clause 5.9.1 as follows:  On the Commencement Date, the Engineer shall deliver to the Contractor three (3) copies, at no cost to the Contractor, of the drawings and any instructions required for the commencement of the Works. The cost of any additional copies of such drawings and/or instructions, as may be required by the Contractor, will be for the account of the Contractor.
5.13.1	The penalty for failing to complete the Works is: <b>R3 000.00 per day</b>  <b><u>or, if completion in portions is required,</u></b>  The penalty for failing to complete portion 1 of the Works is: <b>R0.00 per day.</b> The penalty for failing to complete portion 2 of the Works is: <b>R0.00 per day.</b> The penalty for failing to complete portion 3 of the Works is: <b>R0.00 per day.</b> The penalty for failing to complete portion 4 of the Works is: <b>R0.00 per day.</b> <i>Followed by further portions as required.</i>  The penalty for failing to complete the whole of the works is: <b>R0.00 per day.</b>

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5.14.1	<p>Amend the second paragraph of Clause 5.14.1 as follows:</p> <p>When the Works are about to reach the said stage, the Contractor shall, in writing, request a Certificate of Practical Completion and the Engineer shall, within 14 days after receiving such request, issue to the Contractor a written list setting out the work to be completed to justify Practical Completion. Should the Engineer not issue such a list within the 14 days, the Contractor shall notify the Employer accordingly. Should the Employer not issue such a list within 7 days of receipt of such notice, Practical Completion shall be deemed to have been achieved on the 14<sup>th</sup> day after the contractor requested the Certificate of Practical Completion.</p>
5.16.1	Amend Clause 5.16.1 to delete the proviso in the third paragraph of this clause.
5.16.2	<p>Amend Clause 5.16.2 as follows:</p> <p>No certificate other than the Final Approval Certificate referred to in Clause 5.16.1 shall be deemed to constitute approval of the Works or shall be taken as an admission of the due performance of the Contract or any part thereof, nor of the accuracy of any claim made by the Contractor, nor shall any other certificate exclude or prejudice any of the powers of the Engineer and/or the Employer.</p>
5.16.3	The latent defect period for all works is: <b>5 years</b> .
6.2.1	The type of security for the due performance of the Contract, as selected by the Contractor in the Contract Data, must be delivered to the Employer.
6.2.3	<p>Amend Clause 6.2.3 as follows:</p> <p>If the Contractor has selected a performance guarantee as security, he shall ensure that it remains valid and enforceable as required in terms of the Contract.</p>
6.5.1.2.3	<p>The percentage allowance to cover overhead charges is:</p> <p><b>33%, except on material cost where the percentage allowance is 10%.</b></p>
6.8.2	<p>Contract Price Adjustment (CPA) will be applicable: <b>"Yes"</b>.</p> <p>If CPA is indicated as 'Yes' above the value of payment certificates is to be adjusted by a Contract Price Adjustment Factor:</p> <p>The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values:</p> <p>The value of "x" is 0.15.</p> <p>The values of the coefficients are:</p> <p>a = 0.25. (Labour) b = 0.3 (Contractor's equipment) c = 0.3 (Material) d = 0.15 (Fuel)</p> <p>The values of the coefficients for "Repair and Maintenance Project" (RAMP) contracts are:</p> <p>a = 0.35 (Labour) b = 0.20 (Contractor's equipment) c = 0.35 (Material) d = 0.10 (Fuel)</p>

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6.8.2	<p>The urban area nearest the Site is <b>Bloemfontein</b>. (Select urban area from Statistical News Release, P0141, Table 7.1.)</p> <p>The applicable industry for the Producer Price Index for materials is <b>Electrical Engineering and Mechanical Engineering</b>. (Select the applicable industry from Statistical News Release, P01421, Table 11.)</p> <p>The area for the Producer Price Index for fuel is <b>Diesel Fuel Wholesale - inland</b>. (Select the area from Statistical News Release, P01421, Table 12.)</p> <p>The base month is <b>August 2022</b>. (The month prior to the closing of the tender.)</p>
6.8.3	Price adjustments for variations in the costs of special materials are not allowed.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is: <b>85 %</b> .
6.10.3	The limit of retention money is dependent on the security to be provided by the Contractor in terms of Clause 6.2.1.
6.10.5	<p>Replace Clause 6.10.5 with the following:</p> <p><u>In respect of contracts up to R2 million and in respect of contracts above R2 million where the Contractor elects a security by means of a 10% retention</u>, 50% of the retention shall be released to the Contractor when the Engineer issues the Certificate of Completion in terms of clause 5.14.4. The remaining 50% of the retention shall be released in accordance with the provisions of the conditions of contract and will become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate.</p> <p><u>In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or fixed guarantee of 5% of the Contract Sum (excl. VAT) and a 5% retention of the Value of the Works (excl. VAT)</u>, the cash deposit or fixed guarantee, whichever is applicable, shall be refunded to the Contractor or return to the guarantor, respectively, when the Engineer issues the Certificate of Completion in terms of Clause 5.14.4. The 5% retention of the Value of the Works (excl. VAT) shall become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate.</p> <p><u>In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or a variable guarantee of 10% of the Contract Sum (excl. VAT)</u>, the cash deposit or the variable guarantee, whichever is applicable, will be reduced to 5% of the Value of the Works (excl. VAT) when the Engineer issues the Certificate of Completion in terms of Clause 5.14.4. The balance of the cash deposit shall become due and payable or the variable guarantee shall expire when the Contractor becomes entitled in terms of Clause 5.16.1 to receive the Final Approval Certificate.</p>
7.9.1	<p>Insert the following at the end of Clause 7.9.1:</p> <p>Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other previous or subsequent contract between the Contractor and the Employer.</p>
8.2.2.1	<p>Insert the following as a second paragraph to Clause 8.2.2.1:</p> <p>The Contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, failing which the Employer may cause same to be done and recover the reasonable costs associated therewith from the Contractor.</p>

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8.4.3	<p>Insert a new Clause 8.4.3 as follows:</p> <p>The Contractor shall on receiving a written instruction from the Engineer immediately proceed at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the Works.</p>
8.6.1.1.1	Amend Clause 8.6.1.1.1 to read as follows: Contract Sum plus 10%.
8.6.1.1.2	The value of Plant and materials supplied by the Employer to be included in the insurance sum is: <b>Nil</b>
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is: <b>Nil</b>
8.6.1.3	<p>Amend Clause 8.6.1.3 to delete reference to limit of indemnity, to read as follows:</p> <p>Liability insurance that covers the Contractor against liability for the death of, or injury to any person, or loss of, or damage to any property (other than property while it is insured in terms of Clause 8.6.1.1) arising from or in the course of the fulfillment of the Contract, from the Commencement Date to the date of the end of the Defects Liability Period, if there is one, or otherwise to the issue of the Certificate of Completion.</p>
8.6.1.5	<p>1. <b>Public liability insurance</b> to be effect by the Contractor to a minimum value of:</p> <p><input checked="" type="checkbox"/> R5 million</p> <p><b>or</b></p> <p><input type="checkbox"/> R</p> <p>With a deductible not exceeding 5% of each and every claim.</p> <p>2. <b>Support insurance</b> is to be effected by the Contractor to a minimum value of:</p> <p>R</p> <p>With a deductible not exceeding 5% of each and every claim.</p>
8.6.5	<p>Amend Clause 8.6.5 as follows:</p> <p>Save as otherwise provided in the Contract Data, the insurances referred to in Clause 8.6.1 shall be effected with an insurance company registered in the Republic of South Africa. The Contractor shall submit the insurance policy to the Employer for approval, if so requested.</p>
8.6.7	<p>Amend Clause 8.6.7 as follows:</p> <p>If the Contractor fails to effect and keep in force any of the insurances referred to in Clause 8.6.1, the Employer may cancel the Contract in terms of Clause 9.2.</p>
8.6.8	<p>Insert a new Clause 8.6.8 in provide for high risk insurance for projects executed on areas classified as "High Risk Areas".</p> <p><b>HIGH RISK INSURANCE</b></p> <p>In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:</p>

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8.6.8	<p>(1) <b>Damage to the Works</b> The Contractor shall, from the date of Commencement of the Works until the date of the Certificate of Completion, bear the full risk of and hereby indemnifies and holds harmless the Employer against any damage to and/or destruction of the Works consequent upon a catastrophic ground movement as mentioned above. The Contractor shall take such precautions and security measures and other steps for the protection of the Works as he may deem necessary.</p> <p>When so instructed to do so by the Engineer, the Contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, at the Contractor's own costs.</p> <p>(2) <b>Injury to Persons or Loss of or damage to Properties</b> The Contractor shall be liable for and hereby indemnifies and holds harmless the Employer against any liability, loss, claim or proceeding arising during the Contract Period whether arising in common law or by Statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above.</p> <p>The Contractor shall be liable for and hereby indemnifies the Employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable or personal property or property contiguous to the Site, whether belonging to or under the control of the Employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the Contract Period.</p> <p>(3) It is the responsibility of the Contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in Clauses 8.6.8(1) and 8.6.8 (2) above. Without limiting his obligations in terms of the Contract, the Contractor shall, within 21 days of the Commencement Date and before Commencement of the Works, submit to the Employer proof of such insurance policy, if requested to do so.</p> <p>(4) The Employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the Contractor's default of his obligations as set out in Clauses 8.6.8 (1), 8.6.8 (2) and 8.6.8 (3). Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other existing or subsequent contract between the Contractor and the Employer.</p>
9.1.4	<p>Amend Clause 9.1.4 as follows:</p> <p>In the circumstances referred to in Clauses 9.1.1, 9.1.2 or 9.1.3 (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents), and whether or not the Contract is terminated under the provisions of this Clause, the Contractor shall be entitled to payment of any increased cost of or incidental to the execution of the Works which is specifically attributable to, or consequent upon the circumstances defined in Clauses 9.1.1, 9.1.2 or 9.1.3;</p>
9.1.5	<p>Amend Clause 9.1.5 as follows:</p> <p>If the Contract is terminated on any account in terms of this Clause (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents) , the Contractor shall be paid by the Employer (insofar as such amounts or items have not already been covered by payments on account made to the Contractor) for all measured work executed prior to the date of termination, the amount (without retention), payable in terms of the Contract and, in addition:</p>
9.1.6	<p>This Clause is not applicable to this Contract.</p>



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9.2.1.3.8	<p>Insert a new Clause 9.2.1.3.8 as follows:</p> <p>Has failed to effect and keep in force any of the insurances referred to in Clause 8.6.1,</p>
9.2.4	<p>Insert a new Clause 9.2.4 as follows, to provide for unilateral termination by the Employer:</p> <p>The Employer shall be entitled at any time to unilaterally terminate or cancel this Contract or any part thereof. Save for the following, the Contractor shall not be entitled to claim any other amounts whatsoever in respect of such termination or cancellation of this Contract. The Employer shall be obliged to pay the Contractor as damages and/or loss of profit the lesser of:</p> <p>9.2.4.1 An amount not exceeding 10% of the Contract Sum;</p> <p>9.2.4.2 10% of the value of incomplete work; or</p> <p>9.2.4.3 The Contractor's actual damage or loss as determined by the Employer after receipt of evidence substantiating any such damage or loss.</p>
9.3.2.2	<p>Amend Clause 9.3.2.2 as follows to delete the proviso on lien:</p> <p>The ownership of Plant and unused materials brought onto the Site by the Contractor, and for which the Employer has not made any payment, shall revert to the Contractor and he shall, with all reasonable dispatch, remove from the Site such Plant, materials and all Construction Equipment and Temporary Works.</p>
9.3.3	<p>Insert the following at the end of Clause 9.3.3</p> <p>After cancellation of the Contract by the Contractor, the Contractor, when requested by the Employer to do so, shall not be entitled to refuse to withdraw from the Works on the grounds of any lien or a right of retention or on the grounds of any other right whatsoever.</p>
10.1.3.1	<p>Amend Clause 10.1.3.1 as follows to insert the word "Plant":</p> <p>All facts and circumstances relating to the claims shall be investigated as and when they occur or arise. For this purpose, the Contractor shall deliver to the Engineer, records in a form approved by the Engineer, of all the facts and circumstances which the Contractor considers relevant and wishes to rely upon in support of his claims, including details of all Construction Equipment, labour, Plant and materials relevant to each claim. Such records shall be submitted promptly after the occurrence of the event giving rise to the claim.</p>
10.1.6	<p>Insert a new Clause 10.1.6 as follows:</p> <p>If the Employer fails to give his ruling within the period referred to in Clause 10.1.5 he shall be deemed to have given a ruling dismissing the claim.</p>
10.2.1	<p>Amend Clause 10.2.1 as follows:</p> <p>In respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer shall have the right to deliver a written dissatisfaction claim to the Engineer. This written claim shall be supported by particulars and substantiated.</p>
10.2.2	<p>Amend Clause 10.2.2 as follows:</p> <p>If, in respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer fails to submit a claim within 28 days after the cause of dissatisfaction, he shall have no further right to raise any dissatisfaction on such matter.</p>

**Tender no: BL 22/008**

10.3.2	Amend Clause 10.3.2 as follows to replace “adjudication” with “court”:  If either party shall have given notice in compliance with Clause 10.3.1, the dispute shall be referred to court proceedings in terms of Clause 10.8, unless amicable settlement is contemplated.
10.3.3	Replace “Engineer” with “Employer”.
10.4.2	Amend Clause 10.4.2 as follows to provide for submission to court:  If the other party rejects the invitation to amicable settlement in writing or does not respond in writing to the invitation with 14 days, or amicable settlement is unsuccessful, either party may submit the dispute to court.
10.4.4	Amend Clause 10.4.4 to delete reference to “adjudication” and “arbitration” to read as follows:  Save for reference to any portion of any settlement or decision which has been agreed to be final and binding on the parties, no reference shall be made by or on behalf of either party in any subsequent court proceedings, to any outcome of an amicable settlement, or to the fact that any particular evidence was given, or to any submission, statement or admission made in the course of the amicable settlement.
10.5 10.6 & 10.7	The entire provisions of these Clauses are not applicable to this Contract.
10.10.3	Amend Clause 10.10.3 as follows to reword and remove reference to “arbitrator”:  The court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Engineer and Employer and neither party shall be limited in such proceedings before such court to the evidence or arguments put before the Engineer or Employer for the purpose of obtaining his ruling.

Tender no: **BL 22/008**

	<b>PART 2: DATA PROVIDED BY THE BIDDER</b>
1.1.1.9	The name of the Bidder is: _____
1.2.1.2	<p>The address of the Bidder is:</p> <p>Postal address:</p> <p>_____</p> <p>_____</p> <p>_____ <b>Postal Code:</b> _____</p> <p>Tel: _____ Fax: _____</p> <p>TAX / VAT Registration No: _____</p> <p>Physical address:</p> <p>_____</p> <p>_____</p> <p>_____ <b>Postal Code:</b> _____</p> <p>E-mail address: _____</p>
6.2.1	<p>The security to be provided by the Contractor shall be one of the following:</p> <p>(a) Cash deposit of 10 % of the Contact Sum (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(b) Variable performance guarantee of 10 % of the Contract Sum (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(c) Retention of 10 % of the value of the Works (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(d) Cash deposit of 5 % of the Contract Sum (excl. VAT) plus retention of 5 % of the value of the Works (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(e) Performance guarantee of 5 % of the Contract Sum (excl. VAT) plus retention of 5 % of the value of the Works (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p><b>NB: Guarantees submitted must be issued by either an insurance company duly registered in terms of the Insurance Act [Long-Term Insurance Act, 1998 (Act 52 of 1998) or Short-Term Insurance Act, 1998 (Act 53 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.</b></p>

### C1.3 Form of Guarantee

## DPW-10.2 (EC): VARIABLE CONSTRUCTION GUARANTEE (GCC (2010) 2<sup>nd</sup> EDITION: 2010)

Director-General  
Department of Public Works and Infrastructure  
Government of the Republic of South Africa

### FOR ATTENTION

**Department of Public Works and Infrastructure**  
Private Bag X20605  
**Bloemfontein**  
**9300**

Sir,

### VARIABLE CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF GCC (2010) 2<sup>nd</sup> EDITION 2010

1. With reference to the contract between \_\_\_\_\_  
\_\_\_\_\_ (hereinafter referred to as the “**contractor**”) and the Government of the Republic of South Africa in its Department of Public Works and Infrastructure (hereinafter referred to as the “**employer**”), Contract/Tender No: **BL 22/008**, for the **Bloemfontein High Court: Upgrading and Renovating of the Electrical Systems including Back-up Generator** (hereinafter referred to as the “**contract**”) for the sum of R \_\_\_\_\_, ( \_\_\_\_\_ ), (hereinafter referred to as the “**contract sum**”).  
  
I / We, \_\_\_\_\_  
in my/our capacity as \_\_\_\_\_ and hereby  
representing \_\_\_\_\_ (hereinafter referred to as the “**guarantor**”) advise that the **guarantor** holds at the **employer**’s disposal the sum of R \_\_\_\_\_, ( \_\_\_\_\_ ) being 10% of the **contract sum** (excluding VAT), for the due fulfilment of the **contract**.
2. I / We advise that the **guarantor**’s liability in terms of this guarantee shall be as follows:
  - (a) From and including the date on which this guarantee is issued and up to and including the day before the date on which the last **certificate of completion** of works is issued, the **guarantor** will be liable in terms of this guarantee to the maximum amount of 10% of the **contract sum** (excluding VAT);
  - (b) The **guarantor**’s liability shall reduce to 5 % of the **value of the works** (excluding VAT) as determined at the date of the last **certificate of completion** of works, subject to such amount not exceeding 10% of the **contract sum** (excluding VAT);
  - (c) This guarantee shall expire on the date of the last **final approval certificate**.
3. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis*; and *de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on receipt of a written demand from the **employer** to do so, stating that (in the **employer**’s opinion and sole discretion):
  - (a) the **contractor** has failed or neglected to comply with the terms and/or conditions of the **contract**;  
or

**Tender no: (Insert Tender Number)**

- (b) the **contractor's** estate is sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.
4. Subject to the above, but without in any way detracting from the **employer's** rights to adopt any of the procedures provided for in the **contract**, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.
  5. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon issue of the last **final approval certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.
  6. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the foregoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.
  7. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the **guarantor's** liability ceases.
  8. This guarantee is neither negotiable nor transferable, and
    - (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 5 above, or
    - (b) shall lapse in accordance with clause 2 (c) above.
  9. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than payment of the amount guaranteed.

**SIGNED AT** \_\_\_\_\_ **ON THIS** \_\_\_\_\_ **DAY OF** \_\_\_\_\_ **20**\_\_\_\_\_

**AS WITNESS**

1. \_\_\_\_\_

2. \_\_\_\_\_

**By and on behalf of**

\_\_\_\_\_  
\_\_\_\_\_

**(insert the name and physical address of the guarantor)**

**NAME:** \_\_\_\_\_

**CAPACITY:** \_\_\_\_\_  
**(duly authorised thereto by resolution attached marked Annexure A)**

**DATE:** \_\_\_\_\_

- A. No alterations and/or additions of the wording of this form will be accepted.**
- B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.**
- C. This GUARANTEE must be returned to:** \_\_\_\_\_  
\_\_\_\_\_

## DPW-10.4 (EC): FIXED CONSTRUCTION GUARANTEE GCC (2010) 2<sup>nd</sup> EDITION: 2010

Director-General  
Department of Public Works and Infrastructure  
Government of the Republic of South Africa

### FOR ATTENTION

**Department of Public Works and Infrastructure**  
Private Bag X20605  
**Bloemfontein**  
**9300**

Sir,

### FIXED CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF GCC 2<sup>ND</sup> EDITION 2010

1. With reference to the contract between \_\_\_\_\_  
\_\_\_\_\_ (hereinafter referred to as the “**contractor**”) and the Government of the Republic of South Africa in its Department of Public Works and Infrastructure (hereinafter referred to as the “**employer**”), Contract/Tender No: **BL22/008**, for the **Bloemfontein High Court: Upgrading and Renovating of the Electrical Systems including Back-up Generator** (hereinafter referred to as the “**contract**”), for the sum of R \_\_\_\_\_, ( \_\_\_\_\_ ), (hereinafter referred to as the “**contract sum**”).  
  
I / We, \_\_\_\_\_  
  
in my/our capacity as \_\_\_\_\_ and hereby  
  
representing \_\_\_\_\_ (hereinafter referred to as the “**guarantor**”) advise that the **guarantor** holds at the **employer**’s disposal the sum of R \_\_\_\_\_, ( \_\_\_\_\_ ) being 5% of the **contract sum** (excluding VAT), for the due fulfillment of the **contract**.
2. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis*; and *de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on receipt of a written demand from the **employer** to do so, stating that (in the **employer**’s opinion and sole discretion):
  - (a) the **contractor** has failed or neglected to comply with the terms and/or conditions of the **contract**;  
or
  - (b) the **contractor**’s estate is sequestrated; liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.
3. Subject to the above, but without in any way detracting from the **employer**’s rights to adopt any of the procedures provided for in the **contract**, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.
4. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon the issue of the last **final approval certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.

Tender No: **BL 22/008**

5. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the foregoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.
6. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the **guarantor's** liability ceases.
7. This guarantee is neither negotiable nor transferable, and
  - (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 4 above, or
  - (b) shall lapse on the date of the last **certificate of completion** of works.
8. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than the payment of the amount guaranteed.

SIGNED AT \_\_\_\_\_ ON THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_\_\_.

**AS WITNESS**

1. \_\_\_\_\_

2. \_\_\_\_\_

By and on behalf of

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
(insert the name and physical address of the guarantor)

NAME: \_\_\_\_\_

CAPACITY: \_\_\_\_\_  
(duly authorised thereto by resolution attached marked Annexure A)

DATE: \_\_\_\_\_

- A. No alterations and/or additions of the wording of this form will be accepted.
- B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.
- C. This GUARANTEE must be returned to: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## Part C2: Pricing Data

## C2.1 Pricing Instructions

## PG-02.1 (EC) PRICING ASSUMPTIONS – GCC (2010) 2<sup>nd</sup> Edition 2010

Project title:	<i>Bloemfontein High Court: Upgrading and Renovating of the Electrical Systems including Back-up Generator</i>		
Tender / Quotation no:	BL 22/008	Reference no:	14/2/1/4/18/6706

### C2.1 Pricing Assumptions

#### C2.1.1 GENERAL

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents, which include the Conditions of Tender, Conditions of Contract, the Specifications (including the Project Specification) and the Drawings.

#### C2.1.2 DESCRIPTION OF ITEMS IN THE SCHEDULE

The Bill of Quantities has been drawn up generally in accordance with Civil Engineering Quantities 1990 issued by the SA Institution of Civil Engineers.

The short descriptions of the items in the Bill of Quantities are for identification purposes only and the measurement and payment clause of the Standardized Specifications and the Particular Specifications, read together with the relevant clauses of the Project Specification and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

#### C2.1.3 QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Bill of Quantities are estimates only, and subject to remeasuring during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the General and Special Conditions of Contract, the Specifications and Project Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

#### C2.1.4 PROVISIONAL SUMS

Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 45 of the General Conditions of Contract 2004. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Unauthorized changes made by the Tenderer to provisional items in the Bill of Quantities, or to the provisional percentages and sums in the Summary of the Bill of Quantities will lead to the disqualification of the Tenderer.

#### C2.1.5 PRICING OF THE BILL OF QUANTITIES

The **bills of quantities / lump sum document** forms part of and must be read and priced in conjunction with all the other documents forming part of the **contract documents**, the Standard Conditions of Tender, Conditions of Contract, Specifications, Drawings and all other relevant documentation.

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include

Any reference to words "Bid" or "Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

full compensation for all cost and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.

Each item shall be priced and extended to the "Total" column by the Tenderer, with the exception of the items for which only rates are required, or items which already have Prime Cost or Provisional Sums affixed thereto. If the Contractor omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

The Tenderer is required to check the Bills of Quantities and the numbers of the pages and should any be found to be missing or in duplicate, or should any of the typing be indistinct, or any doubt of obscurity arise as to the meaning of any description or particulars of any item, or if this Tender Enquiry contains any obvious errors, then the Tenderer must immediately inform the Principal Agent and have them rectified or explained in writing as the case may be. No liability whatsoever will be admitted by reason of the Contractor having failed to comply with the foregoing instruction.

No alterations, erasures, omissions or additions is to be made in the text and/or conditions of these Bills of Quantities. Should any such alterations, amendments, note/s or addition be made, the same will not be recognized, but reading of these Bills of Quantities as originally prepared by the Quantity Surveyor will be adhered to.

The contractor is cautioned that the use of any quantities appearing in these Bills of Quantities for the purpose of ordering material, it is done at own risk and no liability whatsoever will be admitted by the Employer or Quantity Surveyor for the correctness of such Quantities. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

The prices and rates to be inserted by the Tenderer in the Bills of Quantities shall be the full inclusive prices to be paid by the Employer for the work described. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Market related prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out. The Employer reserves the right to balance the Bill rates where deemed necessary within the Tendered Amount.

A price or rate is to be entered against each item in the Bills of Quantities, whether the quantities are stated or not. An item against which no rate is/are entered, or if anything other than a rate or a nil rate (for example, a zero, a dash or the word "included" or abbreviations thereof) is entered against an item, it will also be regarded as a nil rate having been entered against that item, i.e. that there is no charge for that item. The Tenderer may be requested to clarify nil rates, or items regarded as having nil rates; and the Employer may also perform a risk analysis with regard to the reasonableness of such rates.

Should the full intent and meaning of any description not be clear, the bidder shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of National Best Practice.

All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

The Tenderer shall fill in rates for all items where the words "rate only" appear in the "Total" column. "Rate Only" items have been included where:

- (a) variations of specified components in the make-up of a pay item may be expected; and
- (b) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For 'Rate Only' items no quantities are given in the "Quantity" column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of

the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the “PW 371” and the principles contained in the latest version of the SANS 1200 in South Africa. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the bidder shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of National Best Practice.

The price quoted against each item of this Bills of Quantities shall cover the full inclusive cost of the complete work to which it refers, as described in the Conditions of Contract and Specifications and as shown on the Drawings and shall allow for labour, material, transporting, loading, storage, supervision, commissioning, wastage, as well as the builders profit and attendance.

The Tenderer must ensure that he fully completes all columns of the Bill of Quantities including the Final Summary. The fully priced bill of quantities must be submitted with the tender or The Final Summary and the Section Summary pages MUST be returned with the tender document as indicated the PA-03 Notice and Invitation to Tender / PA-04 Notice and Invitation for quotation.

The tenderers are to ensure that they have read and understood the project specifications included in C3: Scope of Work. All the information provided in the Scope of Works form part of the work and must be included in the rates.

“The Contractor shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself before submitting his tender (as far as is practicable) as to:

- (a) the form and nature of the Site and its surroundings, including subsurface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of work and materials necessary for the execution and completion of the Works,
- (d) the means of access to the Site and the accommodation he may require

and, in general, shall be deemed to have obtained all information (as far as is practicable) as to risks, contingencies and all other circumstances which may influence or affect his Tender”

#### C2.1.6 VALUE ADDED TAX

The **contract sum** must include for Value Added Tax (VAT). All rates, provisional sums, etc. in the **bills of quantities / lump sum document** shall be in Rands and cents and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities. The rates must however be net (exclusive of VAT) with VAT calculated and added to the total value thereof in the Final Summary. All rates and amounts quoted in the Bill of Quantities

#### C2.1.7 CORRECTION OF ENTRIES

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialled by the Tenderer.

#### C2.1.8 ARITHMETICAL ERRORS

Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication of addition, will be corrected by the Engineer at the tender evaluation stage, as set out in the Tender Data.

### **C2.1.9 CONTRACT DOCUMENTS**

The Tenderers are advised to examine the bills of quantities, drawings and specifications including all other contract documents and make themselves thoroughly acquainted with the nature and requirements of the work, as no claim for extra payment in this regard will be entertained. Should any parts of the drawings not be clearly intelligible to the Tender, he must, before submitting his tender, obtain clarification from the Principal Agent.

### **C2.1.10 UNITS OF MEASUREMENT**

The units of measurement described in the Bill of Quantities are metric units for which the standard international abbreviations are used. Non-standard abbreviations which may appear in the Bill of Quantities are as follows:

No.	=	Number
%	=	Percent
Sum	=	Lump sum
PCsum	=	Prime cost sum
Prov sum	=	Provisional sum
m <sup>3</sup> .km	=	Cubic metre - kilometre
Km-pas	=	kilometre - pass
m <sup>2</sup> .pass	=	square metre – pass

### **C2.1.11 TRADE NAMES**

Tenderers attention is drawn to the fact that wherever trade names or references to any catalogue have been made in these Bills of Quantities, it is purely to establish a standard for the required material. If use is made of any other equally approved material in lieu of the prescribed trade name or catalogue, the necessary price adjustments will be made.

### **C2.1.12 CONTRACT DOCUMENTS**

The Tenderers are advised to examine the bills of quantities, drawings and specifications including all other contract documents and make themselves thoroughly acquainted with the nature and requirements of the work, as no claim for extra payment in this regard will be entertained. Should any parts of the drawings not be clearly intelligible to the Tender, he must, before submitting his tender, obtain clarification from the Principal Agent.

### **C2.1.13 PAYMENTS**

Interim valuations and payments will be prepared on a monthly basis, all in terms of the conditions of contract.

The contractor is to note that no payment will be made for materials stored off site and in the case of materials being stored on site, payment will only be made for such materials on condition that they have not been delivered to the site prematurely, a tax invoice and proof of payment (ownership) is submitted by the Contractor.

### **C2.1.14 ACCOMMODATION ON SITE**

It is imperative to note that no living quarters for construction workers on site will not be permitted for the full duration of the contract unless otherwise stated in the contract data or permission be granted by the Employer.

### **C2.1.15 LOCAL MATERIAL UTILISATION REPORT (LOCAL CONTENT)**

Bidders to note that materials procured for the works should be from South African manufactures and suppliers. Imported materials shall only be considered under exceptional circumstances, based on compelling technical justifications, and subject to the approval by the NDPWI.

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

The contractor shall achieve in the performance of this contract the prescribed local content deliverables as listed in PA36 and annexures C thereto in the respective designated sectors as published by Department Trade Industry and Competition (DTIC). The Service Provider shall submit an accumulative monthly report to the Employer's representative indicating the percentage targets achieved which must be reconciled upon completion of the project and to form part of the final account.

The contractor shall be responsible for record keeping, documenting and submission of monthly local material utilization report with supporting documentation to the Employer's representative within 7 working days of the beginning of the successive month, in terms of DTI&C designated industry/sector/sub-sector schedule as per the PA36 and Annexures C attached to the tender document. The final percentage achievement to be reconciled upon completion of the project and form part of the final account. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.  
the final account.

#### **C2.1.16 CONTRACT PARTICIPATION GOALS**

The contractor shall achieve in the performance of this contract the following Contract Participation Goals (CPGs) as indicated below:

Provision for pricing of compliance with the achieving the CPGs is made in the Contract Participation Goal Section of the Bills of Quantities and it is explicitly pointed out that all requirements in respect of the aforementioned are deemed to be priced thereunder and no additional claims in this regard shall be entertained

Monthly progressive reports to be submitted to the Employer's representative indicating the percentage targets achieved which must be reconciled upon completion of the project and to form part of the final account.

##### **C2.1.16.1 Minimum 30% Sub-contracting Contract Participation Goal**

#### **MINIMUM 30% MANDATORY SUBCONTRACTING TO SMMEs: IMPLEMENTATION OF PREFERENTIAL PROCUREMENT REGULATIONS 2017**

**Minimum Percentage Participation Goal Applicable** Yes ☐ No ☐

Provision is made within the Contract Participation Goal section in the Bill of Quantities for thirty percent (30%) subcontracting to SMMEs in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.5.1. The contractor shall price his Profit and Attendance, all inclusive of associated costs to the contractor for implementation. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

##### **C2.1.16.2 MINIMUM TARGETED LOCAL BUILDING MATERIAL MANUFACTURERS CONTRACT PARTICIPATION GOAL**

**Minimum Percentage Participation Goal Applicable** Yes ☐ No ☐

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Building Material Manufacturers CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.5.2. The contractor shall price his Profit and Attendance, all inclusive of associated costs to the contractor for implementation. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

**C2.1.16.3 MINIMUM TARGETED LOCAL BUILDING MATERIAL SUPPLIERS CONTRACT PARTICIPATION GOAL**

**Minimum Percentage Participation Goal Applicable Yes ☐ No ☐**

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Building Material Suppliers CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.5.3. The contractor shall price his Profit and Attendance, all inclusive of associated costs to the contractor for implementation. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

**C2.1.16.4 MINIMUM TARGETED LOCAL LABOUR CONTRACT PARTICIPATION GOAL**

**Minimum Percentage Participation Goal Applicable Yes ☐ No ☐**

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Labour CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.5.4. The contractor shall price his Profit and Attendance, all inclusive of associated costs to the contractor for implementation. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

**C2.1.16.5 MINIMUM TARGETED ENTERPRISE DEVELOPMENT: CONTRACT PARTICIPATION GOALS (CPG)**

**Minimum Percentage Participation Goal Applicable Yes ☐ No ☐**

A provisional amount has been allowed for within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Enterprise Development CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.5.5. The provisional amount allowed is for the appointment of training coordinator, mentor, training service providers and training of the beneficiary enterprises.

The contractor shall price his Profit and Attendance, all inclusive of associated costs to the contractor for implementation. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

The contractor shall complete a separate bill of quantities upon the award of the project and identification of the respective beneficiaries and the appointment of the training coordinator, mentor, training service providers of which the cost will be offset against the provisional amount allowed in the Bills of Quantities.

**C2.1.16.6 MINIMUM TARGETED TARGETED CONTRACT SKILLS DEVELOPMENT GOALS (CSDG)**

**Minimum Percentage Participation Goal Applicable Yes ☐ No ☐**



A provisional amount has been allowed for within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Skills Development CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.5.6. The provisional amount allowed is for:

- stipends payable to the beneficiaries
- appointment of training coordinator
- appointment of mentor (where applicable)
- appointment of training service providers
- other additional costs as per table 3 of the Standard

The contractor shall price his Profit and Attendance (all inclusive of associated costs to the contractor for implementation and reporting), based on the provisional amount in the Contract Participation Goal section in the Bill of Quantities. The contractor shall complete a separate bill of quantities upon the award of the project and identification of the respective beneficiaries. The CPG value to be achieved will be based on the actual contract amount which will be offset against the provisional amount allowed for within the Contract Participation Goal section in the Bill of Quantities.

Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

#### Payment

The contractor shall upon the appointment of beneficiaries, provide a breakdown of all the associated costs. The contractor shall provide a payment schedule as to how the CPG costs will be claimed against for inclusion in the monthly payment certificates.

(a) Payment to the contractor to accommodate Part/Full Occupational qualification and Trade qualifications;

Should the contractor select Part/Full Occupational qualification and Trade qualifications learners, then the employer shall make provision for payment to the contractor as indicated in Table 3 of the Standard.

The contract skills participation goal, expressed in Rand, shall not be less than the contract amount multiplied by a percentage (%) factor given in Table 2 in the Standard for the applicable class of construction works. Should the contractor select Part/Full Occupational qualification and Trade qualifications learners, then the employer shall make provision for payment to the contractor as indicated in Table 3 of the Standard.

No provision for an additional payment item for the payment of the supervisor and/or mentors for the provision of training as provided for in the Contract Participation Goal section in the Bill of Quantities for the training of part/full time occupational learners and/or trade qualification learners. The associated cost is deemed to be included in general supervision on site.

The contractor shall complete a separate bill of quantities upon award, indicating the type and number of beneficiaries as well as the associated Notional Cost of Training to be provided, on which payment will be based.

(b) Payment to the contractor to accommodate Work Integrated Learners and Candidates for professional registration;

Should the contractor select Work Integrated Learners and/or Candidates for professional registration, then the employer shall make provision for payment to the contractor as indicated in Table 3 of the Standard.

Provisional amounts have been included in the Contract Participation Goal section in the Bill of Quantities for the training of Work Integrated Learners and Candidates for professional registration. The contractor shall price his Profit and Attendance (all inclusive of associated costs to the contractor for implementation and reporting), based on the provisional amount in the Contract Participation Goal section in the Bill of Quantities.

The contractor shall complete a separate bill of quantities upon award, indicating the type and number of beneficiaries as well as the associated Notional Cost of Training to be provided, on which payment will be based.

The CPG value to be achieved will be based on the contract amount as defined by the Standard, which will be offset against the provisional amount allowed for within the Contract Participation Goal section in the Bill of Quantities.

The contractor shall apportion the cost of accommodating work integrated learners (P1 and P2 learners) and candidates for professional registration by using Table 3 in the Standard and this cost will be used to determine the Rand value and will be used in determining the contract participation goal in the Bills of Quantities.

**Table 3: Notional Cost of Training; Headcount**

Type of Training Opportunity	Provision for stipends (Unemployed learners only)	Provisions for mentorship	Provisions for additional costs*	Total costs	
				Unemployed learners	Employed learners
Method 1					
Occupational qualification	R7 000	R0	R9 000	R16 000	R9 000
Method 2					
TVET College graduates	R14 000	R0	R9 000	R23 000	N/A
Apprenticeship	R14 000	R0	R12 000	R26 000	R12 000
Method 3					
P1 and P2 learners	R24 000	R20 000	R4 500	R48 500	N/A
Method 4					
Candidates with a 3 year diploma	R37 000	R20 000	R4 500	R61 500	R20 000
Candidates with 4 year qualification	R47 000	R20 000	R4 500	R71 500	R20 000

*Note: The notional cost of providing training opportunities will increase by CPI on an annual basis based on April CPI. Should the rates increase after bid award or during construction the rates will be adjusted as a remeasurable item.*

**Example: Training Target Calculation for a R65,7m GB contract**

Contract amount	R65 700 000
Contract duration	12 Months
CSDG	0,50%
Minimum CSDG target	0,50% x R65 700 000 = R328 500 (Minimum requirement)

Skills Types	Number of learners	Notional Cost / Learner / Quarter	Notional cost/learner/year	Total Notional Cost over 12 months Contract
<b>Method 2:</b> Workplace learning opportunities, with unemployed TVET graduates	1	R23 000	R92 000	R92 000
<b>Method 3:</b> Candidacy for an unemployed learner with a 3-year qualification	1	R61 500	R246 000	R246 000
<b>Total</b>	<b>2</b>			<b>R338 000</b>

#### **C2.1.16.7 NATIONAL YOUTH SERVICE TRAINING AND DEVELOPMENT PROGRAMME**

**National Youth Service Training and Development Programme Applicable Yes ☒ No ☐**

The programme shall be implemented in terms of the Implementation of the National Youth Service Programme under the Expanded Public Works (EPWP) and shall be priced in the CPG section of the Bills of Quantities.

Provision has been made within the Contract Participation Goal section in the Bill of Quantities for the National Youth Service Training and Development Programme CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.5.7. The contractor to price all elements of this section and allowance must be made for submitting monthly reports in the prescribed manner as per examples of reports bound in the specification document.

#### **C2.1.16.8 LABOUR-INTENSIVE WORKS**

**Labour Intensive Works Applicable Yes ☐ No ☐**

Where labour intensive work is specified in the Bill of Quantities and indicated by “LI” the contractor must price for and include in rates. Contractors are expected to use their initiative to identify additional activities that can be done labour-intensively to comply with the set minimum labour intensity target. Allowance must be made for submitting monthly reports illustrating the value of the works executed under Labour Intensive Works.

#### **C2.2 Submission of Accrual Reports**

The Contractor shall submit accrual reports to the client representative at the end of March and September each year for the duration of the Service Contract period from the date of appointment up to and including project closeout. This is to ensure that PMTE complies with the accounting framework GRAP, which requires that PMTE disclose all its accruals as at the end of each reporting date. Allowance must be made for submitting reports to the Employer’s Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

#### **C2.3. Submission of Monthly Local Material Utilisation Report (Local Content)**

The contractors shall be responsible for record keeping, documenting and submission of monthly local material utilization report with supporting documentation to the Employer’s representative within 7 working days of the beginning of the successive month, in terms of DTI&C designated industry/sector/sub-sector schedule as per the PA36 and Annexures C attached to the tender document. The final percentage achievement to be reconciled upon completion of the project and form part of the final account. Allowance must be made for submitting monthly reports illustrating the value of local material utilisation report.

## Part C3: Scope of Work

## C3 Scope of Work

## PG-01.1 (EC) SCOPE OF WORKS – (GCC (2010) 2<sup>nd</sup> EDITION: 2010)

Project title:	<b><i>Bloemfontein High Court: Upgrading and Renovating of the Electrical Systems including Back-up Generator</i></b>		
Tender no:	BL 22/008	Reference no:	14/2/1/4/18/6706

### C3. Scope of Works

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**NOTE:** This is an example only. Compiler / Designer to provide the applicable contents.

##### B: AMENDMENTS TO THE PARTICULAR SPECIFICATIONS

Variations and additions to the following SABS 1200 standardised specifications;

- SABS 1200A : General
- SABS 1200AB : Engineer's Office

#### C3.3 PARTICULAR SPECIFICATIONS

##### C3.3.1 Technical Specifications

##### C3.3.2 Additional Specifications

#### C3.4 STANDARD SPECIFICATIONS:

The standard specifications on which this contract is based are the **South African Bureau of Standards Standardized Specifications for Civil Engineering Construction SABS 1200**. (Note to compiler. "SABS" has been changed to "SANS"; the SABS 1200 specifications are due to be replaced in the foreseeable future by SANS 2100)

Although not bound in nor issued with this Document, the following Sections of the Standardized Specifications of SABS 1200 shall form part of this Contract:

- SANS 10400 – National Building Regulations
- SANS 10400XA – National Building Regulations – Energy saving initiatives
- SANS 10142 – Code of Practice for the Wiring of Premises

### **3.5 PROJECT SPECIFICATIONS:**

#### **Status**

The Project Specification, consisting of two parts, forms an integral part of the contract and supplements the Standard Specifications.

Part1 A contains a general description of the works, the site and the requirements to be met.

Part B contains variations, amendments and additions to the Standardized Specifications and, if applicable, the Particular Specifications.

In the event of any discrepancy between a part or parts of the Standardised of Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Engineer before the execution of the work under the relevant item.

#### **3.5.1 GENERAL**

##### **PS-1 PROJECT DESCRIPTION:**

**The work covered by this contract comprises the complete electrical and mechanical installation, in working order, as shown in the drawings and as per the specifications, including the supply and installation of all fittings and also the installation of such equipment supplied by the Employer.**

**The building is located in Bloemfontein CBD, with GPS coordinates 29°07'07"S, 26°13'01"E. Bloemfontein High Court is used by judges to handle court cases referred to the master of high court in Bloemfontein. The court is open five (5) days a week from 08:00am to 16:00pm to accommodate multiple office-bearers that hold key positions such as: High Court Registrar, Family Advocate, Master of the High Court, Sheriff of the Court, the Directors of Public Prosecutions, the State Attorney and the Judges etc.**

#### **3.5.2 AMENDMENTS TO THE STANDARD AND PARTICULAR SPECIFICATION:**

#### **C3.5.3 PARTICULAR SPECIFICATIONS:**

#### **C3.6 STANDARD MINIMUM REQUIREMENTS**

In terms of section 5(2) of the Construction Industry Development Board Act, 2000 (Act no. 38 of 2000) (the Act), the Construction Industry Development Board is empowered to establish and promote best practice standards, Standard Requirements and Guidelines which includes the following but not limited to:

C3.61 cidb Best Practice: Green Building Certification, No. 34158 Government Gazette, 1 April 2011

C3.6.2 cidb Standard for Developing Skills through Infrastructure Contracts, No. 36760 Government Gazette, 23 August 2013

- C3.6.3 cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013
- C3.6.4 Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017, No. 40553 Government Gazette, 20 January 2017
- C3.6.5 cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017
- C3.6.6 cidb Standard for Minimum Requirements for Engaging Contractors and Sub-Contractors on Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017
- C3.6.7 cidb Standard for Minimum Requirements for Engaging Contractors and Sub- Contractors on Construction Works Contracts, No. 42021 Government Gazette, 9 November 2018
- C3.6.8 cidb Standard for Developing Skills through Infrastructure Contracts, No. 43495 Government Gazette, 3 July 2020

### C3.7 CONTRACT PARTICIPATION GOALS

The contractor shall achieve in the performance of the contract the following Contract Participation Goals (CPGs) as indicated below. Provision for pricing of compliance with the achieving the CPGs is made in the Contract Participation Goal Section of the Bills of Quantities and it is explicitly pointed out that all requirements in respect of the aforementioned are deemed to be priced thereunder and no additional claims in this regard shall be entertained:

#### C3.7.1 Minimum Thirty Percent (30%) Mandatory Sub-contracting Contract Participation Goal

##### **MINIMUM THIRTY PERCENT (30%) MANDATORY SUBCONTRACTING TO SMMEs: IMPLEMENTATION OF PREFERENTIAL PROCUREMENT REGULATIONS 2017**

##### **Minimum Percentage Participation Goal Applicable**

Yes ☐ No ☒

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprises (SMME's) in executing this contract, irrespective whether the 30% Participation Goal is applicable or not.

The thirty percent (30%) mandatory Sub-contracting shall be achieved in the execution of the contract. in terms of in accordance with the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017 as published in the Government Gazette Notice No. 40553 of 20 January 2017.

- (a) SMME's involvement of at least five percent (5%) of the tender amount at the time of tender to be sourced from within 50km radius of the project site with the intention to maximize use of local SMMEs within "Insert Ward/s, Municipal District, Town, City, Province",
- (b) SMME's involvement of at least twenty five percent (25%) of the Tender Value to be sourced from within 250km radius of the project site.

Bidders are cautioned not to under-price items earmarked to be executed by SMMEs as adjustment to too low rates will not be entertained by the Employer.

Bidders to sub-contract a minimum of thirty percent (30%) of the tender amount including VAT at the time of tender (All inclusive, Including VAT). to any one or more of the following categories:

- a. An EME or QSE
- b. An EME or QSE which is at least 51% owned by black people
- c. An EME or QSE which is at least 51% owned by black people who are youth



- d. An EME or QSE which is at least 51% owned by black people who are women
- e. An EME or QSE which is at least 51% owned by black people with disabilities
- f. An EME or QSE which is at least 51% owned by black people living in rural or underdeveloped areas or townships
- g. A co-operative which is at least 51% owned by black people
- h. An EME or QSE which is at least 51% owned by black people who are Military veterans
- i. More than one of the categories referred to in paragraphs (a) to (h).

Bidders to refer to the CSD for a list of prospective sub-contractors provided with the tender. The bidder to refer to the CSD website should the list provided be insufficient.

**Bidders must ensure that the sub-contractors conform to the following:**

- a. Possess relevant accreditation where applicable;
- b. Be registered with relevant bodies (CIDB, various Councils, etc.) where applicable;
- c. Possess necessary capabilities to deliver the sub-contracted work;
- d. Meet the requirements in terms of the stipulated designated groups; and
- e. Geographical located at the place where the project will be delivered. Geographical location must be determined using the following criteria:
  - Relevant Ward. If not available;
  - Relevant neighbouring Wards. If not available;
  - Relevant Local Municipality. If not available;
  - Relevant District Municipality. If not available;
  - Relevant Metro. If not available;
  - Relevant Province. If not available;
  - Relevant Neighbouring Province. And If not available;
  - Anywhere within the borders of South Africa .

It is the bidder's responsibility to source alternative SMMEs should the parties with whom agreements were entered into at the time of tendering either no longer exist or do not perform or render work of an acceptable standard, subject to the approval by the Employer. Failure to achieve the minimum thirty percent (30%) SMME participation based on the tender amount including VAT, will result in a two percent (2%) penalty on the amount of work on which there is no compliance (Excluding VAT), unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

### C3.7.2 Minimum Targeted Local Material Manufacturer Contract Participation Goal

Minimum Percentage Participation Goal Applicable

Yes ☐ No ☒

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprise Local Material Manufacturers (SMME's) in executing this contract, irrespective whether a minimum percentage Participation Goals is applicable or not.

The Minimum Targeted Local Manufacturers of Material Contract Participation Goal shall be achieved in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017.

A Targeted Local Material Manufacturer is a targeted enterprise that operates or maintains a factory or establishment that produces on its premises materials or goods required by the principal contractor for the performance of the contract.

Note: Adapted from SANS 10845-7:2015, definition 2.13

Preference shall be given to the Targeted Local Material Manufacturer in **"Insert Ward/s, Municipal District, Town, City, Province"**, and provided that:

- (a) Such materials comply in all respects with the specific requirements of PW371 and SANS specifications,

- (b) The nonavailability of such materials shall not adversely affect the desired progress of the specific works,
- (c) The use of such suppliers shall not constitute grounds for any claim for increased cost in respect thereof,
- (d) Materials of at least 2% of the total value of materials purchased including VAT to be sourced from within 50km radius of the project site,
- (e) Material of at least 8% of the total value of materials purchased including VAT to be sourced from within 250km radius of the project site.

Failure to achieve the minimum ten percent (10%) Targeted Local Material Manufacturer participation expressed as a percentage of the original tender amount, excluding allowances and VAT, will result in a two percent (2%) penalty of the prorated targeted value of materials not complied with unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

Example: Total material to be purchased from local manufacturers = R 10 Million and only achieved a R8 Million CPG then the penalty = R2 Million x 2%. The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

### C3.7.3 Minimum Targeted-Local Building Material Suppliers Contract Participation Goal

Minimum Percentage Participation Goal Applicable

Yes ☐ No ☒

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprise Local Material Suppliers (SMME's) in executing this contract, irrespective whether a minimum percentage Participation Goals is applicable or not.

The Minimum Targeted Local Manufacturers of Material Contract Participation Goal shall be achieved in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017.

A targeted supplier is a targeted enterprise that

- a) owns, operates or maintains a store, warehouse or other establishment in which goods are bought, kept in stock and regularly sold to wholesalers, retailers or the public in the usual course of business; and
- b) engages, as its principal business and in its own name, in the purchase and sale of goods.

Note: Adapted from SANS 10845-7:2015, definition 2.14

Preference shall be given to the local material suppliers in the **"Insert Ward/s, Municipal District, Town, City, Province"**, and provided that:

- (a) Such materials comply in all respects with the specific requirements of PW371 and SANS specifications,
- (b) The none availability of such materials shall not adversely affect the desired progress of the specific works,
- (c) The use of such suppliers shall not constitute grounds for any claim for increased cost in respect thereof,
- (d) Materials of at least two percent (2%) of the total value of materials purchased including VAT to be sourced from within 50km of the project site,
- (e) Material of at least eight percent (8%) of the total value of materials purchased including VAT to be sourced from within 250km of the project site.

Failure to achieve the minimum ten percent (10%) Targeted Local Material Manufacturer participation expressed as a percentage of the original tender amount, excluding allowances and VAT, will result in a two percent (2%) penalty of the prorated targeted value of materials not complied with, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

Example: Total material to be purchased from local manufacturers = R 10 Million and only achieved a R8 Million CPG then the penalty = R2 Million x 2%. The bidder shall submit monthly reports in terms

of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

#### C3.7.4 Minimum Targeted Local Labour Contract Participation Goal

Minimum Percentage Participation Goal Applicable

Yes ☐ No ☒

It is the requirement of the employer that the contractor enhances the use of local labour in executing this contract. This is required to be done through the use of both traditional building techniques and labour-intensive construction techniques careful and considered construction planning and implemented in the project irrespective whether a minimum percentage Participation Goal is applicable or not.

The Minimum Targeted Local Manufacturers of Material Contract Participation Goal shall be achieved in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017.

Targeted labour: individuals who:

- a) are employed by the principal contractor, sub-contractor or targeted enterprises in the performance of the contract;
- b) are defined as the target group in the targeting data; and
- c) permanently reside in the target area or who are recognized as being residents of the target area on the basis of identification and association with and recognition by the residents of the target area.

Adapted from SANS 10845-7:2015, definition 2.12

Targeting of labour by skills categories is only permissible within categories of semi-skilled and unskilled labour.

Contract participation goals for semi-skilled and unskilled labour shall be limited to on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract and in a manner that does not compromise worker health and safety. In the case of targeted labour, the certification of records shall be in accordance with SANS 10845-8.

A minimum of thirty percent (30%) of the total semi-skilled and unskilled labour force utilized on the project will be sourced from the "Insert Ward/s, Municipal District, Town, City, Province", Failure to achieve the minimum thirty percent (30%) labour target, based on the total semi-skilled and unskilled labour force, will result in a penalty of R5 000 per person per month for noncompliance, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

#### C3.7.5 Minimum Targeted Enterprise Development Contract Participation Goal

Minimum Percentage Participation Goal Applicable

Yes ☐ No ☒

The aim of this best practice standard for indirect targeting for enterprise development in accordance with the Standard for Indirect Targeting for Enterprise Development (published in Government Gazette 36190 of 25 February 2013) and the Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts (published in Government Gazette 41237 of 10 November 2017) is to promote enterprise development by providing for a minimum

contract participation goal (CPG) of five percent (5%) of the contract amount as defined in the Standard (Tender amount, excluding allowances and VAT on selected contracts to be undertaken by joint-venture partners or to be sub-contracted to developing contractors that are also to be beneficiaries of enterprise development support from the main contractor.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

The contractor shall attain or exceed the enterprise development goal in the performance of the contract. Failing to achieve the Participation Goal will result in A) a thirty percent (30%) penalty of the value not achieved, excluding VAT, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The lead partner or main contractor shall dedicate a minimum five percent (5%) of total project value to provide developmental support to targeted subcontractor or joint venture partner applicable to contracts in Grades 7 to 9, General Building and Civil Engineering contracts. Preference will be given to ***(Insert type of enterprises. eg General Building, Electrical, Mechanical, Plumbing, etc. It could be either just one or any combination of all) Enterprises.***

Provision for pricing of compliance with the aforementioned is made in the preliminaries and it is explicitly pointed out that all requirement in respect of the aforementioned are deemed to be priced thereunder and no additional claims in this regard shall be entertained.

#### C3.7.5.1 Criteria

The main or lead partner of the successful bidder shall:

- (a) There must be a needs analysis for indirect targeting and development or skill standard and should be development in at least any two developmental areas namely;
  - Administrative and cost control systems
  - construction management systems and plans
  - planning, tendering and programming
  - business; technical; procurement skills
  - legal compliance
  - credit rating/history; financial loan capacity/history
  - contractual knowledge
- (b) The above needs analysis shall be mutually agreed upon between contractor and targeted enterprise
- (c) The contractor shall appoint an enterprise development coordinator to:
  - perform needs analysis on the targeted enterprise to identify developmental goals
  - develop a project specific enterprise development plan to improve the targeted enterprise/s performance in the identified developmental areas
  - provide internal mentorship support to improve the targeted enterprise/s performance
  - monitor and submit to the employer's representative a monthly enterprise development report thereby reporting on the progress of the agreed development areas with the targeted enterprise/s
  - submit a project completion report to the Employer's representative for each targeted enterprise.

#### C3.7.5.2 Management

The contractor shall provide a competent person/s to provide internal mentorship to the Targeted Enterprise/s in the two agreed developmental areas.

C3.7.5.3 Competence Criteria for an Enterprise Development Co-ordinator

The enterprise development co-ordinator shall have the following competencies:

- Minimum experience of 5 years in the construction industry at Managerial level as a Site Agent, Contracts Manager, Site Manager, Construction Manager, Business Development Manager or Enterprise Development Manager.
- Minimum experience of 2 years in training and development in Building or Construction; and
- National Diploma or B Degree in the Built Environment or Business Management

C3.7.5.4 Format of Communications

The contractor shall submit to the Employer's Representative:

- *Project interim reports* in the specified format (**ED105P**) detailing interim values of the CPG that was achieved together with an assessment of the enterprise development support provided should be tabled and discussed at least monthly at progress meetings between employer's representative and the contractor;
- *Project completion report* in the specified format (**ED101P**) to the Employer's Representative for acceptance within 15 days of achieving practical completion. The report shall include the value of the CPG that was certified in accordance with the contract, cidb registration numbers of each and every targeted enterprise, and the value of the subcontracted works or of the joint venture entered into; and the participation parameter
- *Enterprise development declaration* (**ED104P**).

C3.7.5.5 The Key Personal

The contractor shall appoint an Enterprise Development Co-ordinator and a competent person/s to provide internal mentorship.

C3.7.5.6 Management Meetings

The contractor shall report to the Employer's Representative on the implementation and progress of the targeted enterprise development and CPG at monthly progress site meetings.

C3.7.5.7 Forms for contract administration

The contractor shall submit to the Employer's Representative the following proformas:

- Form ED 105P Project Interim Report
- Form ED 104P Enterprise Development Declaration
- Form ED 101P Project Completion Report

C3.7.5.8 Records

The contractor shall:

- keep records of the targeted enterprise development
- keep records of the payments made to the targeted enterprises in relation to the CPG.
- ensure all the documentation required in terms of the Standard is provided with each monthly progress payment certificate and according to a prescribed format where applicable.

C3.7.5.9 Payment Certificates

The contractor shall:

- achieve the measurable CPG and providing enterprise development support to the targeted enterprise/s as per the Standard.
- submit payment certificates to the Employer Representative at intervals determined in the Contract.

#### C3.7.5.10 Compliance requirements

##### **Non-compliance with the Best Practice Project Assessment Scheme**

The wording of regulation 27A of the cidb regulations makes provision for the Board to enforce the cidb code of conduct in the event of clients being found to be in breach of the best practice project assessment scheme.

- Not including the requirements of the cidb standards in the conditions of tender
- Not registering the award of contract on the cidb Register of Projects (RoP)
- Not reporting practical completion on the cidb Register of Projects (RoP)

#### 3.7.6 **Minimum Targeted Contract Skills Development Goal (CSDG)**

**Minimum Percentage Participation Goal Applicable** Yes ☐ No ☒

The contractor shall achieve or exceed in the performance of the contract the Contract Skills Development Goal (CSDG) established in the Standard for Developing Skills through Infrastructure Contracts (published in Government Gazette No 43495 of 3 July 2020 and the Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts (published in Government Gazette 41237 of 10 November 2017).

Failing to achieve the targeted Contract Skills Development Goal will result in A) a thirty percent (30%) penalty of the value of the portion not achieved, excluding VAT, and B) the issuing of completion certificates only after the completion certificate of achieving the skills development goal, counter-signed by the relevant individuals has been submitted, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The contractor shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 3 in the Standard and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.

#### C3.7.6.1 Methodology

The contractor shall achieve the measurable contract skills development goal by providing opportunities to learners requiring structured workplace learning using one or a combination of any of the following in relation to work directly related to the contract or order:

Method 1: structured workplace learning opportunities for learners towards the attainment of a part or a full occupational qualification;

Method 2: structured workplace learning opportunities for apprentices or other artisan learners towards the attainment of a trade qualification leading to a listed trade (GG No. 35625, 31 August 2012) subject to at least sixty percent (60%) of the artisan learners being holders of public TVET college qualifications;

Method 3: work integrated learning opportunities for University of Technology or Comprehensive University students completing their national diplomas;



Method 4: structured workplace learning opportunities for candidates towards registration in a professional category by a statutory council listed in Table 1 above.

The contract skills participation goals, expressed in Rand, shall not be less than the contract amount multiplied by a percentage (%) factor given in Table 2 in the Standard for the applicable class of construction works.

*Table 2: Contracting skills development goals for different classes of engineering and construction works contracts*

Class of construction works as identified in terms of Regulation 25 (3) of the Construction Industry Regulations 2004		Construction skills development goal (CSDG) (%)
Designation	Description	
CE	Civil Engineering	0.25
CE and GB	Civil engineering and General Building	0.375
EE	Electrical Engineering works (buildings)	0.25
EP	Electrical Engineering works (infrastructure)	0.25
GB	General Building	0.5
ME	Mechanical Engineering works	0.25
SB	Specialist	0.25

The contractor shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 3 in the Standard and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.

*Table 3: Notional Cost of Training per Headcount*

Type of Training Opportunity	Provision for stipends (Unemployed learners only)	Provisions for mentorship	Provisions for additional costs*	Total costs	
				Unemployed learners	Employed learners
Method 1					
Occupational qualification	R7 000	R0	R9 000	R16 000	R9 000
Method 2					
TVET College graduates	R14 000	R0	R9 000	R23 000	N/A
Apprenticeship	R14 000	R0	R12 000	R26 000	R12 000
Method 3					
P1 and P2 learners	R24 000	R20 000	R4 500	R48 500	N/A
Method 4					
Candidates with a 3 year diploma	R37 000	R20 000	R4 500	R61 500	R20 000
Candidates with 4 year qualification	R47 000	R20 000	R4 500	R71 500	R20 000

- (a) The successful contractor may employ part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable) directly or through a Skills Development Agency (SDA), (A1 - List of cidb accredited SDAs).
- (b) The successful contractor must employ at least sixty percent (60%) of the learners from an FET / TVET college should the contractor select to have part/full occupational qualification learners and trade qualification learners contributing to the CSDG.
- (c) The successful contractor shall employ at least (insert percentage number) from eligible part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable) in the employment of the employer.
- (d) The successful contractor shall ensure that no single method shall contribute more than seventy five percent (75%) of the CSDG for the contract.
- (e) The successful contractor may only place thirty three percent (33%) employed employees or that of his subcontractors contributing to the CSDG.
- (f) The contractor shall employ at least sixty percent (60%) of the learners from a Public FET / TVET college should the contractor select to have trade qualification learners (Method 2) contributing to the CSDG.
- (g) One of the objectives of the project is to train (Insert number) Occupational qualifications, trade qualification, work integrated learners – P1 and P2 learners, professional candidates (Delete that which is not applicable).

#### C3.7.6.2 Management

- (a) The successful contractor must keep site records regarding the part/full occupational qualification learners', trade qualification learners', work integrated learners' or candidates' (delete that which is not applicable) progress, site attendance, hours worked and other relevant information as required by the Standard.
- (b) The successful contractor shall provide the required number of appropriately qualified mentors to the maximum number of part/full occupational qualification learners, trade qualification learners, work integrated learners in the proportion as specified in the Standard.
- (c) The successful contractor shall provide a supervisor to manage the training of the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates (delete that which is not applicable).
- (d) The successful contractor shall submit to the employer's representative a baseline training plan in the specified format (Pro-forma A2) for the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates (delete that which is not applicable) within 30 days of start of the contract.
- (e) The successful contractor shall submit to the employer's representative project interim report in the specified format (Pro-forma A3) on the progress of each of part/full occupational qualification learner, trade qualification learner, work integrated learner, candidate (delete that which is not applicable) every three months.
- (f) The successful contractor shall submit to the employer's representative the names and particulars in the specified format (Pro-forma A4) of the supervisor, mentors for the part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable) within 30 days of start of the contract.
- (g) The successful contractor shall keep a daily record of all the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates on site and their daily activities and shall be made available to the employer's representative on request.



- (h) The successful contractor shall submit to the employer's representative the reports on the progress and status of the part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable) with the monthly invoice for the payment certificate.
- (i) The successful contractor shall have health and safety inductions for all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable).
- (j) The successful contractor shall conduct entry and exit medical tests of all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable).
- (k) The successful contractor shall provide personal protective equipment (PPE) to all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates (delete that which is not applicable) at the start of their employment on site.
- (l) Based on the agreed skills methods the contractor may employ part/full Occupational Qualification Learners and /or Trade Qualification Learners and/or Work Integrated Learners and/or Candidates (delete that which is not applicable) directly or through a Skills Development Agency (SDA), training provider or skills development facilitator (Form A1 - List of cidb accredited SDAs). The contractor shall ensure that no more than one Method shall be applied to any individual concurrently in the calculation of the CSDG for the contract.

### C3.7.7 NATIONAL YOUTH SERVICE TRAINING AND DEVELOPMENT PROGRAMME (NYS)

The programme shall be implemented in terms of the Implementation of the National Youth Service Programme under the Expanded Public Works (EPWP) and shall be priced in the CPG section of the Bills of Quantities. Monthly reports are to be submitted to the Employer's Representative.

Failure by the contractor to achieve the specified number to be trained in the NYS section of the CPG section within the Bills of quantities will result in a thirty percent (30%) penalty of the value not achieved, excluding VAT, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

### C3.7.8 LABOUR-INTENSIVE WORKS

**Labour Intensive Participation Goal Applicable**

Yes ☐ No ☒

Where labour intensive work is specified in the Bill of Qualities and indicated by "LI" the contractor must price for and include in rates. Contractors are expected to use their initiative to identify additional activities that can be done labour-intensively to comply with the set minimum labour intensity target. Allowance must be made for submitting monthly reports illustrating the value of the works executed under Labour Intensive Works.

Failure by the contractor to achieve the specified value of the Labour Intensive Participation Goal as stipulated within the Bills of quantities will result in a thirty percent (30%) penalty of the value not achieved, excluding VAT, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

Employer's objectives:

The employer's objectives are to deliver public infrastructure using labour-intensive methods in accordance with EPWP Guidelines.

Labour-intensive works:

Labour-intensive works shall be constructed/maintained using local workers who are temporarily employed in terms of the scope of work. A twenty percent (20%) penalty of the value of the works will be imposed on items where unauthorised use of plant was used to carry out work which was to be done labour-intensively.

Labour-intensive competencies of supervisory and management staff:

Contractors shall only engage supervisory and management staff in labour-intensive works that have completed the skills programme including Foremen/ Supervisors at NQF level 4 "National Certificate: Supervision of Civil Engineering Construction Processes" and Site Agent/ Manager at NQF level 5 "Manage Labour-Intensive Construction Processes" or equivalent QCTO qualifications (See Appendix C) at NQF outlined in Table 1

### C3.7.8.1 GENERIC LABOUR-INTENSIVE SPECIFICATION

Contractors are referred to the Guidelines for the Implementation of Labour-intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP) for the generic labour-intensive specification applicable to the contract.

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- trenches having a depth of less than 1.5 metres
- stormwater drainage
- roads
- sidewalks and non-motorised transport infrastructure
- water and sanitation

**Precedence**

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail

**Hand excavateable material**

Hand excavateable material is:

**a) granular materials:**

- i) whose consistency when profiled may in terms of table 2 be classified as very loose, loose, medium dense, or dense; or
- ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;

**b) cohesive materials:**

- i) whose consistency when profiled may in terms of table 2 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
- ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;

**Note**

- 1) A boulder is material with a particle size greater than 200mm, a cobble and gravel is material between 60 and 200mm.
- 2) A dynamic cone penetrometer is an instrument used to measure the in-situ shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60° with respect to the horizontal) into the material being used.

Table 2: Consistency of materials when profiled			
GRANULAR MATERIALS		COHESIVE MATERIALS	
CONSISTENCY	DESCRIPTION	CONSISTENCY	DESCRIPTION

Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure.
Medium dense	Considerable resistance to penetration by sharp end of a geological pick.	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in up to 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of a geological pick; requires many blows for excavation.	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

#### **Trench excavation**

All hand excavateable material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

#### **Compaction of backfilling to trenches (areas not subject to traffic)**

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stampers;

- a) to ninety percent (90%) Mod AASHTO;
- b) such that in excess of 5 blows of a dynamic cone penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than ten (10%) gravel of size less than 10mm and contains no isolated boulders, or
- c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

#### **Excavation**

All excavateable material including topsoil classified as hand excavateable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand. Any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

#### **Clearing and grubbing**

Grass and bushes shall be cleared by hand.

#### **Shaping**

All shaping shall be undertaken by hand.

#### **Loading**

All loading shall be done by hand. Haulage equipment should be selected in a manner that allows loading by hand to the greatest extent possible.

#### **Haul**

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

### **Offloading**

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage.

### **Spreading**

All material shall be spread by hand.

### **Compaction**

Small areas may be compacted by hand provided that the specified compaction is achieved. Appropriate rollers should be used where higher (than can be achieved by hand) levels of compaction are required or for large areas.

### **Grassing**

All grassing shall be undertaken by sprigging, sodding, or seeding by hand.

### **Stone pitching and rubble concrete masonry**

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must be collected, loaded, off loaded and placed by hand.

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

Grout shall be mixed and placed by hand.

### **Manufactured Elements**

Elements manufactured or supplied by the Contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320kg. Where the mass of an element exceeds 55 kg, consideration should be given to the size of the element relative to its total mass related to the number of workers who would be needed to lift such mass

## **C3.8 Submission of Accrual Reports**

The Contractor shall submit accrual reports to the client representative at the end of March and September each year for the duration of the Service Contract period from the date of appointment up to and including project closeout. This is to ensure that PMTE complies with the accounting framework GRAP, which requires that PMTE disclose all its accruals as at the end of each reporting date.

## **C.3.9 Submission of Monthly Local Material Utilisation Report (Local Content)**

The contractors shall be responsible for record keeping, documenting and submission of monthly local material utilization report with supporting documentation to the Employer's representative within 7 working days of the beginning of the successive month, in terms of DTI&C designated industry/sector/sub-sector schedule as per the PA36 and Annexures C attached to the tender document. The final percentage achievement to be reconciled upon completion of the project and form part of the final account. Failure by the contractors to achieve the specified percentage of local content per designated industry/sector/sub-sector as listed will result in a thirty percent thirty percent (30%) penalty of the value not achieved, excluding VAT, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.



# **DEPARTMENT OF PUBLIC WORKS**

## **HIV/AIDS**

### **SPECIFICATION**

**OCTOBER 2004**

## **SECTION**

### **HIV/AIDS SPECIFICATION**

#### **HIV/AIDS REQUIREMENTS**

##### **1 SCOPE**

This specification contains all requirements applicable to the Contractor for creating HIV/AIDS awareness amongst all of the Workers involved in this project for the duration of the construction period, through the following strategies:

- Raising awareness about HIV/AIDS through education and information on the nature of the disease, how it is transmitted, safe sexual behaviour, attitudes towards people affected and people living with HIV/AIDS, how to live a healthy lifestyle with HIV/AIDS, the importance of voluntary testing and counselling, the diagnosis and treatment of Sexually Transmitted Infections and the closest health Service Providers;
- Informing Workers of their rights with regard to HIV/AIDS in the workplace;
- Providing Workers with access to condoms and other awareness material that will enable them to make informed decisions about sexual practices.

##### **2 DEFINITIONS AND ABBREVIATIONS**

###### **2.1 Definitions**

Service Provider: The natural or juristic person recognised and approved by the Department of Public Works as a specialist in conducting HIV/AIDS awareness programmes.

Service Provider Workshop Plan: A plan outlining the content, process and schedule of the training and education workshops, presented by a Service Provider which has been approved by the Representative/Agent.

Worker: Person in the employ of the Contractor or under the direction or supervision of the Contractor or any of his Sub-contractors, who is on site for a minimum period of 30 days in all.

###### **2.2 Abbreviations**

- HIV : Human Immunodeficiency Virus.
- AIDS : Acquired Immune Deficiency Syndrome.
- STI : Sexually Transmitted Infection.

##### **3 BASIC METHOD REQUIREMENT**

###### **3.1 The Contractor shall, through a Service Provider, conduct onsite workshops with the Workers.**

The Service Provider shall develop and compile a Service Provider Workshop Plan to be presented at the workshops and which will be best suited for this project to achieve the specified objectives with regard to HIV/AIDS awareness.

The Service Provider Workshop Plan shall be based on the following information provided by the Contractor:

- Number of Workers and Sub-contractors on site;
- When new Workers or Sub-contractors will join the construction project;
- Duration of Workers and Sub-contractors on site;
- How the maximum number of Workers can be targeted with workshops;
- How the Contractor prefers workshops to be scheduled, e.g. three hourly sessions per Worker, or one 2.5 hour workshop per Worker;
- Profile of Workers, including educational level, age and gender (if available);
- Preferred time of day or month to conduct workshops;
- A Gantt chart reflecting the construction programme, for scheduling of workshops;
- Suitable venues for workshops.

The Contractor shall submit the Service Provider Workshop Plan for approval within 21 days after the tender acceptance date. After approval by the Representative/Agent, the Contractor shall make available a suitable venue that will be conducive to education and training.

3.2 The Service Provider Workshop Plan shall address, but will not be limited to the following:

- 3.2.1 The nature of the disease;
- 3.2.2 How it is transmitted;
- 3.2.3 Safe sexual behaviour;
- 3.2.4 Post exposure services such as voluntary counselling and testing (VCT) and nutritional plans for people living with HIV/AIDS;
- 3.2.5 Attitudes towards other people with HIV/AIDS;
- 3.2.6 Rights of the Worker in the workplace;
- 3.2.7 How the Awareness Champion will be equipped prior to commencement of the HIV/AIDS awareness programme with basic HIV/AIDS information and the necessary skills to handle questions regarding the HIV/AIDS awareness programme on site sensitively and confidentially;
- 3.2.8 How the Service Provider will support the Awareness Champion;
- 3.2.9 Location and contact numbers of the closest clinics, VCT facilities, counselling services and referral systems;
- 3.2.10 How the workshops will be presented, including frequency and duration;
- 3.2.11 How the workshops will fit in with the construction programme;
- 3.2.12 How the Service Provider will assess the knowledge and attitude levels of attendees to structure workshops accordingly;
- 3.2.13 How the video will be used;
- 3.2.14 How the Service Provider will elicit maximum participation from the Workers;
- 3.2.15 A questions and answers slot (interactive session).

The Service Provider Workshop Plan shall encompass the Specific Learning Outcomes (SLO) as stipulated.

## **4 HIV/ AIDS AWARENESS EDUCATION AND TRAINING**

### **4.1 Workshops**

The Contractor shall ensure that all Workers attend the workshops.

The workshops shall adequately deal with all the aspects contained in the Service Provider Workshop Plan. A video of HIV/AIDS in the construction industry, which can be obtained from all Regional Offices of the Department of Public Works, is to be screened to Workers at workshops. In order to enhance the

learning experience, groups of not exceeding 25 people shall attend the interactive sessions of the workshops.

## **4.2 Recommended practice**

### **4.2.1 Workshop Schedule**

Presenting information contained in the Service Provider Workshop Plan can be divided in as many workshop sessions as deemed practicable by the Contractor, provided that all Workers are exposed to all aspects of the workshops as outlined in the Service Provider Workshop Plan.

Breaking down the content of information to be presented to Workers into more than one workshop session however, has the added advantage that messages are reinforced over time while providing opportunity between workshop sessions for Workers to reflect and test information. Workers will also have an opportunity to ask questions at a following session.

### **4.2.2 Service Providers**

A database of recommended Service Providers is available from all Regional Offices of the Department of Public Works.

### **4.2.3 HIV/AIDS Specific Learning Outcomes and Assessment Criteria**

Workers shall be exposed to workshops for a minimum duration of two-and-a-half hours. In order to set a minimum standard requirement, the following specific learning outcomes and assessment criteria shall be met.

#### **4.2.3.1 UNIT 1: The nature of HIV/AIDS**

After studying and understanding this unit, the Worker will be able to differentiate between HIV and AIDS and comprehend whether or not it is curable. The Worker will also be able to explain how the HI virus operates once a person is infected and identify the symptoms associated with the progression of HIV/AIDS.

Assessment Criteria:

1. Define and describe HIV and AIDS;
2. List and describe the progression of HIV/AIDS.

#### **4.2.3.2 UNIT 2: Transmission of the HI virus**

After studying and understanding this unit, the Worker will be able to identify bodily fluids that carry the HI virus. The Worker will be able to recognise how HIV/AIDS is transmitted and how it is not transmitted.

Assessment Criteria:

1. Record in what bodily fluids the HI virus can be found;
2. Describe how HIV/AIDS can be transmitted;
3. Demonstrate the ability to distinguish between how HIV/AIDS is transmitted and misconceptions around transmittance of HIV/AIDS.

#### **4.2.3.3 UNIT 3: HIV/AIDS preventative measures**

After studying and understanding this unit, the Worker will comprehend how to act in a way that would minimise the risk of HIV/AIDS infection and to use measures to prevent the HI virus from entering the bloodstream.



Assessment Criteria:

1. Report on how to minimise the risk of HIV/AIDS infection;
2. Report on precautions that can be taken to prevent HIV/AIDS infection;
3. Explain or demonstrate how to use a male and female condom;
4. List the factors that could jeopardize the safety of condoms provided against HIV/AIDS Transmission.

#### 4.2.3.4 UNIT 4: Voluntary HIV/AIDS counselling and testing

After studying and understanding this unit, the Worker will be able to recognise methods of testing for HIV/AIDS infection. The Worker will be able to understand the purpose of voluntary HIV/AIDS testing and pre- and post-test counseling.

Assessment Criteria:

1. Describe methods of testing for HIV/AIDS infection;
2. Report on why voluntary testing is important;
3. Report on why pre- and post-test counselling is important.

#### 4.2.3.5 UNIT 5: Living with HIV/AIDS

After studying and understanding this unit, the Worker will be able to recognise the importance of caring for people living with HIV/AIDS and be able to manage HIV/AIDS.

Assessment Criteria:

1. List and describe ways to manage HIV/AIDS;
2. Describe nutritional needs of people living with HIV/AIDS;
3. Describe ways to embrace a healthy lifestyle as a person living with HIV/AIDS;
4. Explain the need for counselling and support to people living with HIV/AIDS.

#### 4.2.3.6 UNIT 6: Treatment options for people with HIV/AIDS

After studying and understanding this unit, the Worker will be familiar with the various treatments available to HIV/AIDS infected or potentially HIV/AIDS infected people.

Assessment Criteria:

1. Discuss anti-retroviral therapy;
2. List methods of treatment to prevent HIV/AIDS transmission from mother-to-child;
3. Describe the need for treatment of opportunistic diseases for people living with HIV/AIDS;
4. Describe post exposure prophylactics.

#### 4.2.3.7 UNIT 7: The rights and responsibilities of Workers in the workplace with regard to HIV/AIDS

After studying and understanding this unit, the Worker will be able to identify the rights and responsibilities of the Worker living with HIV/AIDS in the workplace. The Worker will recognise the importance of accepting colleagues living with HIV/AIDS and treating them in a non-discriminative way.

Assessment Criteria:

1. Discuss the rights of a person living with HIV/AIDS in the workplace;
2. Discuss the responsibilities of a person living with HIV/AIDS in the workplace;
3. Report on why acceptance and non-discrimination of colleagues living with HIV/AIDS is important.

#### **4.3 Displaying of plastic laminated posters and distribution of information booklets**

The Contractor shall obtain a set of four laminated posters conveying different key messages and information booklets. The contractor should include the costs of posters and information booklets in his/her tender price.

The above-mentioned posters and information booklets have been prepared to raise awareness and to share information about HIV/AIDS and STI's.

Posters or display stands shall be displayed on site as soon as possible, but not later than 14 days after the date of site handover.

Posters shall be displayed in areas highly trafficked by Workers, including toilets, rest areas, the site office and compounds.

The posters on display must always be intact, clear and readable.

Information booklets must be distributed to all Workers as soon as possible, but not later than 14 days after site handover, or as soon as the Worker joins the site.

### **5 PROVIDING WORKERS WITH ACCESS TO CONDOMS**

The Contractor shall provide and maintain condom dispensers and make both male and female condoms, complying with the requirements of SABS ISO 4074, available at all times to all Workers at readily accessible points on site, for the duration of the contract. The Contractor may obtain condom dispensers from the Department of Health and condoms may be obtained from the Local Clinic or the Department of Health.

At least one male and one female condom dispenser and a sufficient supply of condoms, all to the approval of the Representative/Agent, shall be made available on site within 14 days of site hand over. Contractors should note that arrangements to obtain condoms from the Department of Health Clinics prior to site hand over may be necessary, to ensure that condoms are available within 14 days of site handover.

Condoms shall be made available in areas highly trafficked by Workers, including toilets, the site office and compounds.

### **6 ENSURING ACCESS TO HIV/AIDS TESTING AND COUNSELLING FACILITIES AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)**

The Contractor shall provide Workers with the names of the closest Service Providers that provide HIV/AIDS testing and counselling and Clinics providing Sexually Transmitted Infection (STI) diagnosis and treatment. Information on these Service Providers and Clinics must be displayed on a poster of a size not smaller than A1 in an area highly trafficked by Workers.

### **7 APPOINTMENT OF AN HIV/AIDS AWARENESS CHAMPION**

- 7.1 Within 14 days of site handover the Contractor shall appoint an Awareness Champion from amongst the Workers, who speaks, reads and writes English, who speaks and understands all the local languages spoken by the Workers and who shall be on site during all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive and confidential manner.

7.2 The Awareness Champion shall be responsible for:

7.2.1 Liaising with the Service Provider on organising awareness workshops;

7.2.2 Filling condom dispensers and monitoring condom distribution;

7.2.3 Handing out information booklets;

7.2.4 Placing and maintaining posters.

## **8 MONITORING**

The Contractor shall grant to the Representative/Agent reasonable access to the construction site, in order to establish that the Contractor complies with his obligations regarding HIV/AIDS awareness under this contract.

The Contractor must report problems experienced in implementing the HIV/AIDS requirements to the Representative/Agent.

The attached SITE CHECKLIST (SCHEDULE A) shall be completed and submitted at every construction progress inspection to the Representative/Agent.

The attached SERVICE PROVIDER REPORT (SCHEDULE B) shall be completed and submitted on a monthly basis to the Department's Project Manager, through the Representative/Agent.

The attached CONTRACTOR HIV/AIDS PROGRAMME REPORT (SCHEDULE C), a close out programme report, shall be completed by the Contractor at the end of the contract.

## SCHEDULE A

### HIV/AIDS PROGRAMME: SITE CHECKLIST

When did construction commence: \_\_\_\_\_

Name of Departmental Project Manager: \_\_\_\_\_

*Please refer to HIV/AIDS Programme activities during the reporting period*

Tick the block if Contractor satisfactorily complied with specifications																												
DATE	PI				PI				PI				PI				PI				PI							
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Programme implemented within 14 days of site handover																												
Awareness champion on site																												
HIV/AIDS awareness service provider report																												
Male condom dispenser																												
Sufficient male condoms available																												
Male condom dispenser in a highly trafficked area																												
Female condom dispenser																												
Sufficient female condoms available																												
Female condom dispenser in a highly trafficked area																												
All four types of posters displayed																												
Posters in a good condition																												
Posters in a highly trafficked area																												
Posters displayed on local support services: clinic & VCT centre																												
Support service poster/s in highly trafficked area																												
Support service poster/s in a good condition																												

<i>Please indicate the applicable number for the reporting period</i>							
Workers on payroll (at PI)							
Sub-Contractors who will be on site for longer than 30 days (at PI)							
Workshop attendees							
Number of workshops held							
Scheduled workshops according to approved workshop plan							
Booklets distributed							
Male condoms distributed							
Female condoms distributed							

\_\_\_\_\_  
Representative/Agent

\_\_\_\_\_  
Date

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Date

Date of progress inspection: (ccyy/mm/dd)

Reporting period: (ccyy/mm/dd) \_\_\_\_\_ to (ccyy/mm/dd) \_\_\_\_\_

Deviations from HIV/AIDS awareness programme plan:

Corrective actions:

\_\_\_\_\_  
Representative/Agent

\_\_\_\_\_  
Departmental Project Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

**SCHEDULE B**

**HIV/AIDS AWARENESS PROGRAMME: SERVICE PROVIDER REPORT**

Reporting period: (ccyy/mm/dd) \_\_\_\_\_ to (ccyy/mm/dd) \_\_\_\_\_

Number of workshops conducted in reporting period: \_\_\_\_\_

Number of scheduled workshops according to approved workshop plan: \_\_\_\_\_

Deviations from workshop plan:

State reasons for deviating from workshop plan:

Corrective actions:

\_\_\_\_\_  
Service Provider

\_\_\_\_\_

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

# HIV/AIDS AWARENESS PROGRAMME : WORKSHOP CONTENT ADDRESSED

Fill in the applicable information with regard to each workshop conducted																												
DATE	W/S				W/S				W/S				W/S				W/S				W/S				W/S			
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
<b>Content of workshop:</b> (Mark the content included)																												
SLO1																												
SLO2																												
SLO3																												
SLO4																												
SLO5																												
SLO6																												
SLO7																												
HIV/AIDS in construction video																												
Indicate the duration of the workshop in hours																												
Total number of Workers																												
Indicate workshop venue																												



## HIV/AIDS AWARENESS PROGRAMME: ATTENDANCE REGISTER

[illegible]

## SCHEDULE C

### CONTRACTOR HIV/AIDS PROGRAMME REPORT

Project name: \_\_\_\_\_

Project Location: \_\_\_\_\_

Contract value of project: R\_\_\_\_\_

Department of Public Works Project Manager: \_\_\_\_\_

HIV/AIDS Programme duration: (ccyy/mm/dd) \_\_\_\_\_ to (ccyy/mm/dd) \_\_\_\_\_

#### AWARENESS MATERIAL

Describe location of posters displayed during the programme: \_\_\_\_\_

\_\_\_\_\_

Comments on posters: \_\_\_\_\_

Indicate total number of booklets distributed: \_\_\_\_\_

Comments on booklets: \_\_\_\_\_

\_\_\_\_\_

#### CONDOMS

Indicate total number of male condoms distributed: \_\_\_\_\_

Indicate total number of female condoms distributed: \_\_\_\_\_

Describe where male condom dispenser was placed: \_\_\_\_\_

Describe where female condom dispenser was placed: \_\_\_\_\_

#### HIV/AIDS WORKSHOPS

Indicate the total number of HIV/AIDS workshops conducted: \_\_\_\_\_

Indicate the duration of workshops: \_\_\_\_\_

Indicate the total number of Workers that participated in the HIV/AIDS workshops: \_\_\_\_\_

Indicate the total number of Workers that were exposed to the video on HIV/AIDS in the Construction Industry:

\_\_\_\_\_

Comments on HIV/AIDS workshops on site: \_\_\_\_\_

\_\_\_\_\_

**GENERAL**

Briefly describe programme activities and satisfaction with outcome: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Additional comments, suggestions or needs with regard to the HIV/AIDS awareness programmes on site:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Please indicate if your company has a formal HIV/AIDS policy focussing on HIV/AIDS awareness raising and care and support of HIV/AIDS Workers:

Yes	No	Currently developing one
-----	----	--------------------------

Please indicate if, to your knowledge, you have lost any workers during the duration of the project to HIV/AIDS related sicknesses. One or more of the following might indicate an HIV/AIDS related death:

Excessive weight loss  
Reactive TB  
Hair loss  
Severe tiredness

Coughing or chest pain  
Pain when swallowing  
Persistent fever  
Diarrhoea

Vomiting  
Meningitis  
Memory loss  
Pneumonia

Number of HIV/AIDS-related deaths: \_\_\_\_\_

\_\_\_\_\_  
**Contractor**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Departmental Project Manager**

\_\_\_\_\_  
**Date**



DEPARTMENT OF PUBLIC WORKS

## **OCCUPATIONAL HEALTH AND SAFETY**

# **HEALTH & SAFETY SPECIFICATIONS**

**FOR**

**PROJECTS AND MAINTENANCE  
(BLOEMFONTEIN HIGH COURT: UPGRADING AND  
RENOVATING OF THE ELECTRICAL SYSTEMS INCLUDING  
BACK-UP GENERATOR)**

**MANAGED ON BEHALF OF**

**THE NATIONAL DEPARTMENT OF  
PUBLIC WORKS**

**PUBLIC WORKS:**

- |   |   |   |
|---|---|---|
| <b><u>Mr.</u> K.E Nkuna</b><br>079-699-2114     | - | <b>HEALTH &amp; SAFETY OFFICER (ELECTRICAL)</b> |
| <b><u>Mr.</u> Phumza Zweni</b>                  | - | <b>HEAD: CONSTRUCTION PROJECT MANAGEMENT</b>    |
| <b><u>Mr.</u> Mr. C Dyantyi</b><br>051 408 7366 | - | <b>PROJECT MANAGER</b>                          |

**NB**

**The Health and Safety File compiled by the Principal Contractor shall only comprise of relevant Requirement for compliance based on the Scope of Works and page 16-28 of this document/specification.**

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## 1. PREAMBLE

\*In terms of Construction Regulation 4(1) (a) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), the Department of Public Works, as the Client and/or its Agent on its behalf, shall be responsible to prepare Health & Safety Specifications for any intended construction project and provide any Principal Contractor who is making a bid or appointed to perform construction work for the Client and/or its Agent on its behalf with the same.

\*The Client's further duties are as described in The Act and the Regulations made there-under. The Principal Contractor shall be responsible for the Health & Safety Policy for the site in terms of Section 7 of the Act and in line with Construction Regulation 5 as well as the Health and Safety Plan for the project.

This 'Health and Safety Specifications' document is governed by the "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), hereinafter referred to as 'The Act'. Notwithstanding this, cognizance should be taken of the fact that no single Act or its set of Regulations can be read in isolation. Furthermore, although the definition of Health and Safety Specifications stipulates 'a documented specification of all health and safety requirements pertaining to associated works on a construction site, so as to ensure the health and safety of persons', it is suggested that the entire scope of the Labor legislation, including the Basic Conditions of Employment Act be considered as part of the legal compliance system. With reference to this specification document this argument is limited to all health, safety and environmental issues pertaining to the site of the project as referred to here-in. It is reiterated that environmental management can not be disregarded.

Due to the wide scope and definition of construction work, every construction activity and site will be different, and may change even on a daily basis. Therefore, due caution is to be taken when drafting the Health and Safety Plan based on these Health and Safety Specifications. Prior to drafting the Health and Safety Plan, and in consideration of the information contained here-in, the contractor shall set up a Risk Assessment Program to determine any risk associated with any hazard at the construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard. This Risk Assessment and the steps identified will be the basis or point of departure for the Health and Safety Plan. The Health and Safety Plan shall include documented 'Methods of Statement' detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in the Risk Assessment.

The Department of Public Works is tasked to provide accommodation and operational facilities to a very large proportion of the approximate 40 National Departments responsible for the governance of the Department of Public Works. A very large number of State employees and public users of the facilities and the services provided there-in directly interacts with the facilities provided by the well-being, health and safety of a great number of people. This Department thus has directly or indirectly, an impact on the Republic of South Africa as well as the National Parliament.

In this a high premium is to be placed on the health and safety of the most valuable assets of the Department of Public Works. These are its personnel, the personnel of its Clients and the physical assets of which it is the custodian and may also include the public as well. The responsibilities the Department and relevant stakeholders have toward its employees and other people present in the facilities or on the sites are captured further in this specification document. These responsibilities stem from both moral, civil and a variety of legal obligations.

\*Every effort has been made to ensure that this specification document is accurate and adequate in all respects. Should it however, contain any errors or omissions they may not be considered as grounds for claims under the contract for additional reimbursement or extension of time, or relieve the Principal Contractor from his responsibilities and accountability in respect of the project to which this specification document pertains.

## **\*2. SCOPE OF HEALTH AND SAFETY SPECIFICATION DOCUMENT**

The Health and Safety Specifications pertaining to the project; Phase 1 and Phase 2" etc. etc.), cover the subjects contained in the index and is intended to outline the normal as well as any special requirements of the Department pertaining to the health and safety matters (including the environment) applicable to the project in question. These Specifications should be read in conjunction with the Act, the Construction Regulations and all other Regulations and Safety Standards which were or will be promulgated under the Act or incorporated into the Act and be in force or come into force during the effective duration of the project. The stipulations in this specification, as well as those contained in all other documentation pertaining to the project, including contract documentation and technical specifications shall not be interpreted, in any way whatsoever, to countermand or nullify any stipulation of the Act, Regulations and Safety Standards which are promulgated under, or incorporated into the Act.

## **3. PURPOSE**

The Department is obligated to implement measures to ensure the health and safety of all people and properties affected under its custodianship or contractual commitments, and is further obligated to monitor that these measures are structured and applied according to the requirements of these Health and Safety Specifications.

The purpose of this specification document is to provide the relevant Principal Contractor (and his /her contractor) with any information which might affect the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; and to protect persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work during the carrying out of construction work for the Department of Public Works. The Principal Contractor (and his /her contractor) is to be briefed on the significant health and safety aspects of the project and to be provided with information and requirements on inter alia:

- a) Safety considerations affecting the site of the project and its environment;
- b) Health and safety aspects of the associated structures and equipment;
- c) Submissions on health and safety matters required from the Principal Contractor (and his /her contractor); and
- d) The Principal Contractor's (and his /her contractor) health & safety plan.

It must be ensured that the Principal Contractor (and his /her contractor) is fully aware of what is expected from him/her with regard to the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Regulations made there-under including the applicable safety standards, and in particular in terms of Section 8 of the Act.

The **Occupational Health and Safety Act (Sixth Revised Edition: 16.2 August 2016), 1993 (Act 85 of 1993)** in its entirety shall apply to the contract to which this specification document applies. The Construction Regulations promulgated on 18 July 2003 and incorporated into the above Act by Government Notice R 1010, published in Government Gazette 25207 shall apply to any person involved in construction work pertaining to this project, as will the Act **read with the Amended Construction Regulation 2014**

## **4. DEFINITIONS**

**"Purpose of the Act" –NB: This information below shall be read with the new Construction Regulations 2017(Sixth Revised Edition: 16.2 August 2016), 1993 (Act 85 of 1993)**

To provide for the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

**"Agent"** –Means any person who acts as a representative for a client;

**"Client"** –Means any person for whom construction work is performed;

**"Construction Work"** is defined as any work in connection with –



- (a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- (b) the installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
- (c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
- (d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work;

**“Contractor”** –means an employer, as defined in Section 1 of the Act, who performs construction work and includes Principal Contractors;

**“Health and Safety File”** –means a file, or other record in permanent form, containing the information required a contemplated in the regulations;

**“Health and Safety Plan”** –means a documented plan which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified;

**“Health and Safety Specification”** –means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons;

**“Method Statement”** –means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment;

**“Principal Contractor”** –means an employer, as defined in section 1 of the Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site;

**“Risk Assessment”** –means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard.

## **\*5. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT**

### **5.1 Structure and Organization of OH&S Responsibilities**

#### **5.1.1. Overall Supervision and Responsibility for OH&S**

- \* The Client and/or its Agent on its behalf to ensure that the Principal Contractor, appointed in terms of Construction Regulation 4(1)(c), implements and maintains the agreed and approved H&S Plan.
- \* The Chief Executive Officer of the Principal Contractor in terms of Section 16 (1) of the Act to ensure that the Employer (as defined in the Act) complies with the Act. The pro forma Legal Compliance Audit may be used for this purpose.
- \* All OH&S Act (85 /1993), Section 16 (2) appointee/s as detailed in his/her/their respective appointment forms to regularly, in writing, report to their principals on matters of health and safety per routine and ad hoc inspections and on any deviations as soon as observed, regardless of whether the observation was made during any routine or ad hoc inspection and to ensure that the reports are made available to the principal Contractor to become part of site records (Health & Safety File).
- \* The Construction Supervisor and Assistant Construction Supervisor/s appointed in terms of Construction Regulation 6 to regularly, in writing, report to their principals on matters of health and safety per routine and ad hoc inspections and on any deviations as soon as observed, regardless of whether the observation was made during any routine or ad hoc inspection and to ensure that the reports are made available to the principal Contractor to become part of site records (Health & Safety File).
- \* All Health and Safety Representatives (SHE-Reps) as per Section 18 of the Act.

### 5.1.2. Further (Specific) Supervision Responsibilities for OH&S

Several appointments or designations of responsible and /or competent people in specific areas of construction work are required by the Act and Regulations. The following competent appointments, where applicable, in terms of the Construction Regulations are necessary to ensure compliance to the Act, Regulations and Safety Standards.

#### Required appointments as per the Construction Regulations:-

Item	Regulation	Appointment	Responsible Person
1.	<b>4(1)(c)</b>	<b>Principal contractor for each phase or project</b>	<b>Client</b>
2.	<b>5.(3)(b)</b>	<b>Contractor</b>	<b>Principal Contractor</b>
3.	<b>5(11)</b>	<b>Contractor</b>	<b>Contractor</b>
4.	<b>6(1)</b>	<b>Construction supervisor</b>	<b>Contractor</b>
5.	6(2)	Construction supervisor sub-ordinates	Contractor
6.	<b>6(6)</b>	<b>Construction Safety Officer</b>	<b>Contractor</b>
7.	<b>7(1)</b>	<b>Person to carry out risk assessment</b>	<b>Contractor</b>
8.	<b>7(4)</b>	<b>Trainer/Instructor</b>	<b>Contractor</b>
9.	8(1)(a)	Fall protection planner	Contractor
10.	10 (a)	Formwork & support work supervisor	Contractor
11.	10(e) + (f)	Formwork & support work examiner	Contractor
12.	11(1)	Excavation supervisor	Contractor
13.	<b>11(3)(b)(ii)(b)</b>	<b>Professional engineer or technologist</b>	<b>Contractor</b>
14.	11(3)(k)	Explosives expert	Contractor
15.	12(1)	Supervisor demolition work	Contractor
16.	12(2) + (3)	Demolition expert	Contractor
17.	12(11)	Explosives expert	Contractor
18.	14(2)	Scaffold supervisor	Contractor
19.	15(1)	Suspended platform supervisor	Contractor
20.	15(2)(c)	Compliance plan developer	Contractor
21.	15(8)(c)	Suspended platform expert	Contractor
22.	15(13)	Outrigger expert	Contractor
23.	17(8)(a)	Material hoist inspector	Contractor
24.	18(1)	Batch plant supervisor	Contractor
25.	18(7)	Batch plant operator	Contractor
26.	19(2)(b)	Power tool expert	Contractor
27.	19.2 (g) (i)	Power tool controller	Contractor
28.	20(f)	Tower crane operator	Contractor
29.	<b>21(1)(d)(i)</b>	<b>Construction vehicle and mobile plant operator</b>	<b>Contractor</b>
30.	21(1)(j)	Construction vehicle and mobile plant inspector	Contractor
31.	22(d)	Temporary electrical installations inspector	Contractor
32.	22 (e)	Temporary electrical installations controller	Contractor
33.	26 (a)	Stacking and storage supervisor	Contractor
34.	27 (h)	Fire equipment inspector	Contractor

This list may be used as a reference or tool to determine which components of the Act and Regulations would be applicable to a particular site, as was intended under the Chapter “Preamble” above. (Page 4)

## 5.2 Communication & Liaison

5.2.1 OH&S Liaison between the Employer, the Principal Contractor, the other Contractors, the Designer and other concerned parties will be through the H&S Committee as per the procedures determined by the H&S Committee.

5.2.2 In addition to the above, communication may be directly to the Client or his appointed Agent, verbally or in writing, as and when the need arises.

- 5.2.3 Consultation with the workforce on OH&S matters will be through their Supervisors and H&S Representatives ('SHE – Reps')
- 5.2.4 The Principal Contractor will be responsible for the dissemination of all relevant OH&S information to the other Contractors e.g. design changes agreed with the Client and/or its Agent on its behalf and the Designer, instructions by the Client and/or his/her agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/situations etc.

## **6. INTERPRETATION**

(i) The Occupational Health and Safety Act and all its Regulations, with the exception of the Construction Regulations, distinguish between the roles, responsibilities and functions of employers and employees respectively. It views consultants and contractors as employees of the "owner" of a construction or operational project, the "owner" being regarded as the employer. Only if formally agreed to by way of the written agreement in this regard between the "owner(s)" and consultant and /or between the "owner(s)" and the contractor(s), will these assumptions be relinquished in favor of the position agreed upon between the relevant parties.

(ii) The position taken by the Construction Regulations is that the "owner", in terms of its instructions, operates (has to operate) in the role of client as per relevant definition. The contractors working for the "client" are seen to be in two categories, i.e. the Principal Contractor and Contractors. The Principal Contractor has to take full responsibility for the health and safety on the site of the relevant project / contract. This includes monitoring health and safety conditions and overseeing administrative measures required by the Construction Regulations from all contractors on the project site. (Ordinary / sub) Contractors are required to operate under the scrutiny and control (in terms of all health and safety measures which are covered in the Construction Regulations) of the Principal Contractor. Where for the work the Principal Contractor will have to execute himself, practical health and safety measures are applicable, he will also be subject to the relevant requirements with which (ordinary / sub) Contractors have to comply. The Principal Contractor will, however, not have to actually fulfill such requirements in respect of any of the work / functions of any (ordinary / sub) Contractors on the site for which he has been appointed as Principal Contractor. However, he has to monitor / oversee such processes, ensuring that the requirements are complied with and that the required appointments / evaluations / inspections / assessments and tests are done and that the records are duly generated and kept as prescribed in the Construction Regulations. This has to feature clearly in the Principal Contractor's Health and Safety Plan.

## **7. RESPONSIBILITIES**

### **7.1 Client**

7.1.1 The Client or his appointed Agent on his behalf will appoint each Principal Contractor for the project in writing for assuming the role of Principal Contractor as intended by the Construction Regulations and determined by the Bills of Quantities.

7.1.2 The Client or his appointed Agent on his behalf shall discuss and negotiate with the Principal Contractor the contents of the health and safety plan of the both Principal Contractor and Contractor for approval.

7.1.3 The Client or his appointed Agent on his behalf will take reasonable steps to ensure that the health and safety plan of both the Principal Contractor and Contractor is implemented and maintained. The steps taken will include periodic audits at intervals of at least once every month.

7.1.4 The Client or his appointed Agent on his behalf will prevent the Principal Contractor and/or the Contractor from commencing or continuing with construction work should the Principal Contractor and/or the Contractor at any stage in the execution of the works be found to:

- have failed to have complied with any of the administrative measures required by the Construction Regulations in preparation for the construction project or any physical preparations necessary in terms of the Act;
- have failed to implement or maintain their health and safety plan;
- have executed construction work which is not in accordance with their health and safety plan; or

- Act in any way which may pose a threat to the health and safety of any person(s) present on the site of the works or in its vicinity, irrespective of him/them being employed or legitimately on the site of the works or in its vicinity.

## 7.2 **Principal Contractor**

7.2.1 The Principal Contractor shall accept the appointment under the terms and Conditions of Contract. The Principal Contractor shall sign and agree to those terms and conditions and shall, before commencing work, notify the Department of Labor of the intended construction work in terms of Regulation 3 of the Construction Regulations. Annexure B of this Specification contains a “Notification of Construction Work” form. The Principal Contractor shall submit the notification in writing prior to commencement of work and inform the Client or his Agent accordingly.

7.2.2 The Principal Contractor shall ensure that he is fully conversant with the requirements of this Specification and all relevant health and safety legislation. This Specification is not intended to supersede the Act nor the Construction Regulations or any part of either. Those sections of the Act and the Construction Regulations which apply to the scope of work to be performed by the Principal Contractor in terms of this contract (entirely or in part) will continue to be legally required of the Principal Contractor. The Principal Contractor will in no manner or means be absolved from the responsibility to comply with all applicable sections of the Act, the Construction Regulations or any Regulations proclaimed under the Act or which may perceivable be applicable to this contract.

7.2.3 The Principal Contractor shall provide and demonstrate to the Client a suitable and sufficiently documented Health and safety plan based on this Specification, the Act and the Construction Regulations, which shall be applied from the date of commencement of and for the duration of execution of the works. This plan shall, as appendices, include the health and safety plans of all Sub-contractors for which he has to take responsibility in terms of this contract.

7.2.4 The Principal Contractor shall provide proof of his registration and good standing with the Compensation Fund or with a licensed compensation insurer prior to commencement with the works.

7.2.5 The Potential Principal Contractor shall, in submitting his tender, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, the Act and Construction Regulations. (Note: This shall have to be contained in the conditions of tender upon which a tenderer’s offer is based.)

7.2.6 The Principal Contractor shall consistently demonstrate his competence and the adequacy of his resources to Perform the duties imposed on the Principal Contractor in terms of this Specification, the Act and the Construction Regulations.

7.2.7 The Principal Contractor shall ensure that a copy of his health and safety plan is available on site and is Presented upon request to the Client, an Inspector, Employee or Sub-contractor.

7.2.8 The Principal Contractor shall ensure that a health and safety file, which shall include all documentation required in terms of the provisions of this Specification, the Act and the Construction Regulations, is opened and kept on site and made available to the Client or Inspector upon request. Upon completion of the works, the Principal Contractor shall hand over a consolidated health and safety file to the Client.

7.2.9 The Principal Contractor shall, throughout execution of the contract, ensure that all conditions imposed on his Sub-contractors in terms of the Act and the Construction Regulations are complied with as if they were the Principal Contractor.

7.3 **Contractor** (Responsibilities of ..... in terms of this contract and health and safety specification)

As per 7.2 above as and where applicable or as indicated in the letter of appointment.

## 8. **SCOPE OF WORK**

These specifications are applicable to the specific scope of work pertaining to the above-mentioned project as detailed in the tender documents (**Building Work Specifications**), this amongst all includes for example: (elaborate sufficiently and provide adequate information to give full understanding of all work to be done)

## 8.1 BUILDING WORK:

### NB

The scope of shall be read with the Tender Document or bill of Quantities (Part C3: Scope of Works).

### SCOPE:

#### EXISTING SINGLE-STOREY BUILDINGS:

1. Popper notice shall be given to all persons in and around the building where construction work shall be executed. The building shall occupy during the construction period.
2. Notification to the provincial director must be given.
3. The contractor and sub-contractors must be registered and in good standing with the compensation fund at all time.
4. The contractor shall appoint a full-time competent employee in writing as the construction supervisor.
5. Work shall be executed at a height greater than 3 meters.
6. Excavation work exceeding 1 meter and more.
7. All site work; the contractor must take care of proper sun-protection for all his workmen, woman.
8. No work, contractor or sub-contractor shall be allowed to work in in-climate weather.
9. No danger tape shall be used on the construction site. All work areas shall proper be brigade.
10. Special care must be taken of;-  
Contractors using scaffolding shall ensure that such scaffolding, when used, complies with the safety standards are carried out under the supervision of a competent person who has been appointed in writing.

## 8.2 ELECTRICAL WORK:

#### ELECTRICAL INSTALLATIONS AND MACHINERY ON CONSTRUCTION SITES:

Notwithstanding the provisions contained in the Electrical Installation Regulations promulgated by Government Notice No. R.2920 of 23 October 1992 and the Electrical Machinery Regulations promulgated by Government Notice No. R.1953 of August 1988, respectively, as amended.

1. *Work shall be medium and low voltage electrical work. The contractor shall given proof of his high and low voltage registration.*

[Notes to the Client, Designer, Project Manager, Architect, and Agent:

add references to the above project and include specific elements identified as the 'Critical Few'. The 'Critical Few' refer to those few or singular elements of the project that have the potential to impact in a major or devastating way on the project as a whole in the event of an accident or incident occurring. (20:80 principle)

Because of the inherent generic nature of the Health and Safety Specifications document, specific relevant information on the project must be provided and it may be necessary to draft the required information under this paragraph on a separate attached document.

**If at any time after commencement of the project changes is brought about to the design or construction, sufficient health and safety information and appropriate resources are to be made available to the Principal Contractor to execute the work safely.]**

**N.B** The Principal Contractor shall on tendering make provision for the cost of health and safety measures in terms of his/her documented Health and Safety Plan and measures based on these Health and Safety Specifications during the period of the project. Construction Regulation 5(3)(g) determines that potential contractors submitting tenders have made provision for the cost of health and safety measures during the construction process.

**THE HEALTH AND SAFETY PLAN IS THEREFORE TO BE INCLUDED WITH THE TENDER DOCUMENTS WHEN TENDERS ARE INVITED FOR THE PROJECT.**

## **9. HEALTH AND SAFETY FILE**

The Principal Contractor must, in terms of Construction Regulation 5(7), keep a Health & Safety File on site at all times that must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to the Principal Contractor and the agreements between the parties and details of work being done. A more detailed list of documents and other legal requirements that must be kept in the Health and Safety File is attached as an addendum to this document.

### **IMPORTANT:**

The Health and Safety File will remain the property of the Client and/or its Agent on its behalf throughout the period of the project and shall be consolidated and handed over to the Client and/or its Agent on its behalf at the time of completion of the project.

## **10. OH&S GOALS AND OBJECTIVES AND ARRANGEMENTS FOR MONITORING AND REVIEWING OH&S PERFORMANCE**

The Principal Contractor is required to maintain a CIFR of at least 8 (See Annexure 3. to this document: "Measuring Injury Experience") and report on this to the Client and/or its Agent on its behalf on a monthly basis.

## **11. IDENTIFICATION OF HAZARDS AND DEVELOPMENT OF RISK ASSESSMENTS, STANDARD WORKING PROCEDURES (SWP) AND METHOD STATEMENTS**

The Principal Contractor is required to develop Risk Assessments, Standard Working Procedures (SWP) and Method Statements for each activity executed in the contract or project (see 4. below "Project/Site Specific Requirements")

The identification of hazards is over and above the hazards identification programme and those hazards identified during the drafting of the Health and Safety Plan.

## **12. ARRANGEMENTS FOR MONITORING AND REVIEW**

### **12.1 Monthly Audit by Client and/or its Agent on its behalf**

The Client and/or its Agent on its behalf will be conducting Periodic Audits at times agreed with the Principal Contractor Audit to comply with Construction Regulation 4(1)(d) to ensure that the principal Contractor has implemented, is adhering to and is maintaining the agreed and approved OH&S Plan.

### **12.2 Other audits and inspections by client and/or its agent on its behalf.**

The Client and/or its Agent on its behalf reserves the right to conduct any other ad hoc audits and inspections as it and/or its Agent on its behalf deem necessary.

A representative of the Principal Contractor and the relevant Health and Safety Representative(s) (SHE-Reps) must accompany the Client and/or its Agent on its behalf on all Audits and Inspections and may conduct their own audit/inspection at the same time. Each party will, however, take responsibility for the results of his/her own audit/inspection results. The Client and/or its Agent on its behalf may require to be handed a copy of the minutes of

the previous Health and Safety Committee meeting reflecting possible recommendations made by that committee to the Employer for reference purposes.

### **12.3 Reports**

The Principal Contractor is required to provide the Client and/or its Agent on its behalf with a monthly "SHE Risk Management Report".

The Principal Contractor shall report all incidents where an employee is injured on duty to the extent that he/she:

- \* dies
- \* becomes unconscious
- \* loses a limb or part of a limb
- \* is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed

OR where:

- \* a major incident occurred
- \* the health or safety of any person was endangered
- \* where a dangerous substance was spilled
- \* the uncontrolled release of any substance under pressure took place
- \* machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
- \* machinery ran out of control,

to the Provincial Director of the Department of Labour (DoL) within seven days and at the same time to the Client and/or its Agent on its behalf.

(Section 24 of the Act & General Administrative Regulation 8.)

The Principal Contractor is required to provide the Client and/or its Agent on its behalf with copies of all statutory reports required in terms of the Act and the Regulations.

The Principal Contractor is required to provide a.s.a.p. the Client and/or its Agent on its behalf with copies of all internal and external accident/incident investigation reports including the reports contemplated in 12.7, 12.8.2, 15, 16, 17, 21 and 22 below. As soon as the occurrence of any accident/incident of whatever nature comes to the notice of the Principal Contractor, it shall be reported immediately to any of the following:

### **12.4 Review**

The Principal Contractor is to review the Hazard Identification, Risk Assessments and Standard Work Processes at each Production Planning and Progress Report meeting as the construction work develops and progresses and each time changes are made to the designs, plans and construction methods and processes.

The Principal Contractor must provide the Client and/or its Agent on its behalf, other Contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated in the above paragraph.

### **12.5 Site Rules and other Restrictions**

#### **12.5.1 Site OH&S Rules**

The Principal Contractor must develop a set of site-specific OH&S rules that will be applied to regulate the Health and Safety Plan and associated aspects of the construction.

When required, visitors and non-employees upon entering the site shall be issued with the proper Personal Protective Equipment (PPE) as and when necessary.

#### **12.5.2 Security Arrangements**

The Principal Contractor must establish site access rules and implement and maintain these throughout the construction period. Access control must include the rule that non-employees shall at all times be provided with fulltime supervision while on site.

The Principal Contractor must develop a set of Security rules and procedures and maintain these throughout the construction period.

If not already tasked to the H&S Officer appointed in terms of Construction Regulation 6(6), the Principal Contractor must appoint a competent Emergency Controller who must develop contingency plans for any emergency that may arise on site as indicated by the risk assessments. These must include a monthly practice/testing programmed for the plans e.g. January: trench collapse, February: flooding etc. and practiced/tested with all persons on site at the time, participating.

## **12.6 Training**

The contents and syllabi of all training required by the Act and Regulations including any other related or relevant training as required must be included in the Principal Contractor's Health and Safety Plan and Health and Safety File.

### **12.6.1 General Induction Training**

All employees of the Principal and other Contractors must be in possession of proof of General Induction training

### **12.6.2 Site Specific Induction Training**

All employees of the Principal and other Contractors must be in possession of Site Specific Occupational Health and Safety Induction training.

### **12.6.3 Other Training**

All operators, drivers and users of construction vehicles, mobile plant and other equipment must be in possession of valid proof of training.

All employees in jobs requiring training in terms of the Act and Regulations must be in Possession of valid proof of training as follows:

Occupational Health and Safety Training Requirements: (as required by the Construction Regulations and as indicated by the Health and Safety Specification Document & the Risk Assessment/s and recommendations by the Health and Safety Committee):

- \* General Induction (Section 8 of the Act)
- \* Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act)
- \* Site/Project Manager
- \* Construction Supervisor
- \* OH&S Representatives (Section 18 (3) of the Act)
- \* Training of the Appointees indicated in 12.6.1. & 12.6.2.
- \* Operation of Cranes (Driven Machinery Regulations 18 (11)
- \* Operators & Drivers of Construction Vehicles & Mobile Plant (Construction Regulation 21)
- \* Basic Fire Prevention & Protection (Environmental Regulations 9 and Construction Regulation 27)
- \* As a minimum basic First Aid to be upgraded when necessary (General Safety Regulations 3)
- \* Storekeeping Methods & Safe Stacking (Construction Regulation 26)
- \* Emergency, Security and Fire Co-coordinator

## **12.7 Accident and Incident Investigation**

The Principal Contractor is responsible to oversee the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to receive first aid or be referred for medical treatment by a doctor, hospital or clinic. (General Administrative Regulation 9)



The results of the investigation to be entered into the Accident/Incident Register listed above. (General Administrative Regulation 9)

The Principal Contractor is responsible for the investigation of all non-injury incidents as described in Section 24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar incidents in future.

The Principal Contractor is responsible for the investigation of all road traffic accidents relating to the construction site and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

Notwithstanding the requirements of Section 24 of the Act, ALL incidents shall be investigated and reported on in writing, irrespective of whether such incident gave rise to injury or damage.

## **12.8 H&S Representatives (SHE-Reps) and H&S Committees**

### **12.8.1 Designation of H&S Representatives ('SHE – Reps')**

Where the Principal Contractor employs more than 20 persons (including the employees of other Contractors (sub-contractors) he has to appoint one H&S Representative for every 50 employees or part thereof. (Section 17 of the Act and General Administrative Regulation 6. & 7.)

H&S Representatives have to be designated in writing and the designation shall be in accordance with the Collective Agreement as concluded between the parties as is required in terms of General Administration Regulation 6.

### **12.8.2 Duties and Functions of the H&S Representatives**

The Principal Contractor must ensure that the designated H&S Representatives conduct at least a weekly inspection of their respective areas of responsibility using a checklist and report thereon to the Principal Contractor, after which these reports shall be consolidated for submission to the Health and Safety Committee.

H&S Representatives must be included in and be part of accident/incident investigations.

H&S Representatives shall be members of at least one H&S Committee and must attend all meetings of that H&S committee.

### **12.8.3 Establishment of H&S Committee(s)**

The Principal Contractor must establish H&S Committees consisting of designated H&S Representatives together with a number of Employers Representatives appointed as per Section 19(3) that are not allowed to exceed the number of H&S Representatives on the committee. The persons nominated by the employer on a H&S Committee must be designated in writing for such period as may be determined by him. The H&S Committee shall co-opt advisory (temporary) members and determine the procedures of the meetings including the chairmanship.

The H&S Committee must meet minimum monthly and consider, at least, the following Agenda for the first meeting. Thereafter the H&S Committee shall determine its own procedures as per the previous paragraph.

#### **Agenda:**

- 1) Opening and determining of chairmanship (only when necessary)
- 2) Minutes of Previous Minutes
- 3) Observations
- 4) Program and Safety considerations
- 5) Hygiene
- 6) Housekeeping improvement
- 7) Incidents & Accidents / Injuries
- 8) Registers:
  - a H&S Rep. Inspections
  - b. Matters of First Aid
  - c. Scaffolding

- d. Ladders
- e. Excavations
- f. Portable Electric Equipment
- g. Fire Equipment
- h. Explosive Power Tools
- i. Power Hand tools
- j. Incident! Report Investigation
- k. Pressure Vessels
- l. Personal Protective Equipment
- 9) Safety performance Evaluations
- 10) Education & Safety promotion program
- 11) First Aid Officials and training in First Aid
- 12) Demarcation of work- /hazardous-/safe areas/walkways
- 13) Posters and signage
- 14) Environmental preservation and conservation
- 15) Specific training programmes
- 16) General
- 17) Date of Next Meeting
- 18) Closing

### **13. PROJECT/SITE SPECIFIC REQUIREMENTS**

The following is a list of specific activities and considerations that have been identified for the project and site and for which Risk Assessments, Standard Working Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed by the Principal Contractor:

- \* **Clearing & Grubbing of the Area/Site**
- \* **Site Establishment including:**
  - **Office/s**
  - **Secure/Safe Storage and storage areas for materials, plant & equipment**
  - **Ablution facilities**
  - **Sheltered dining area**
  - **Vehicle access to the site**
- \* **Dealing with existing Structures.**
- \* **Location of existing Services**
- \* **Installation & Maintenance of Temporary Construction Electrical Supply, Lighting and Equipment**
- \* **Adjacent Land uses/Surrounding property exposures**
- \* **Boundary & Access control/Public Liability Exposures (Remember: the Employer is also responsible for the OH&S of non-employees affected by his/her work activities.)**
- \* **Health risks arising from neighboring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning, allergies etc.**
- \* **Exposure to Noise**
- \* **Exposure to Vibration**
- \* **Protection against dehydration and heat exhaustion**
- \* **Protection from wet & cold conditions**
- \* **Dealing with HIV/Aids and other diseases as per specific programme provided by the client and/or its Agent on its behalf**
- \* **Use of Portable Electrical Equipment including:**
  - **Angle grinder**
  - **Electrical Drilling machine**
  - **Skill saw**
- \* **Excavations including:**
  - **Ground/soil conditions**
  - **Trenching**
  - **Shoring**
  - **Drainage**
  - **Daily inspections**
- \* **Welding including:**
  - **Arc Welding**

- Gas welding
- Flame Cutting
- Use of LP Gas torches and appliances
- \* Loading & Offloading of Trucks
- \* Aggregate/Sand and other Materials Delivery
- \* Manual and Mechanical Handling
- \* Lifting and Lowering Operations
- \* Driving & Operation of Construction Vehicles and Mobile Plant including:
  - Trenching machine
  - Excavator
  - Bomag Roller
  - Plate Compactor
  - Front End Loader
  - Mobile Cranes and the ancillary lifting tackle
  - Parking of Vehicles & Mobile Plant
  - Towing of Vehicles & Mobile Plant
- \* Use and Storage of Flammable Liquids and other Hazardous Substances – the client and/or its Agent on its behalf to be informed of this prior to commencing of the project
- \* Layering and Bedding of trench floor
- \* Installation of Pipes in trenches
- \* Backfilling of Trenches
- \* Protection against Flooding
- \* Gabion work
- \* Use of Explosives - the client and/or its Agent on its behalf to be informed of this prior to commencing of the project
- \* Protection from Overhead Power Lines
- \* As discovered by the Principal Contractor's hazard identification exercise
- \* As discovered from any inspections and audits conducted by the Client and/or its Agent on its behalf or by the Principal Contractor or any other Contractor on site
- \* As discovered from any accident/incident investigation.

**13.1 The following are in particular requirements depending on scope of works and will form a basis for compliance audits.**

- 1. Administrative & Legal Requirements**
- 2. Education, Training & Promotion**
- 3. Public Safety & Emergency Preparedness**
- 4. Personal Protective Equipment**
- 5. Housekeeping**
6. Scaffolding, Formwork & Support work
- 7. Ladders**
- 8. Electrical Safeguarding**
- 9. Emergency/Fire Prevention & Protection**
10. Excavations & Demolition
11. **Tools**
12. Cranes
13. Personnel & Material Hoists
14. Transport & Materials Handling
- 15. Site Plant & Machinery**
- 16. Plant & Storage Yards/Site Workshops Specifics**
- 17. Health & Hygiene**

## **14. OUTLINED DATA, REFERENCES AND INFORMATION ON CERTAIN AND/OR SPECIFIC OBLIGATORY REQUIREMENTS TO ENSURE COMPLIANCE**

### **14.1 Administrative & Legal Requirements**

<b>OHS Act Section/ Regulation</b>	<b>Subject</b>	<b>Requirements</b>
Construction. Regulation 3	<b>Notice of carrying out Construction work</b>	Department of Labour notified Copy of Notice available on Site
General Admin. Regulation 4	<b>*Copy of OH&amp;S Act (Act 85 of 1993)</b>	Updated copy of Act & Regulations on site. Readily available for perusal by employees.
COID Act Section 80	<b>*Registration with Compens. Insurer</b>	Written proof of registration/Letter of good standing available on Site
Construction. Regulation 4 & 5(1)	<b>H&amp;S Specification &amp; Programmed</b>	H&S Spec received from Client and/or its Agent on its behalf OH&S programme developed & Updated regularly
Section 8(2)(d) Construction. Regulation 7	<b>*Hazard Identification &amp; Risk Assessment</b>	Hazard Identification carried out/Recorded Risk Assessment and – Plan drawn up/Updated RA Plan available on Site Employees/Sub-Contractors informed/trained
Section 16(2)	<b>*Assigned duties (Managers)</b>	Responsibility of complying with the OH&S Act assigned to other person/s by CEO.
Construction. Regulation 6(1)	<b>Designation of Person Responsible on Site</b>	Competent person appointed in writing as Construction Supervisor with job description
Construction. Regulation 6(2)	<b>Designation of Assistant for above</b>	Competent person appointed in writing as Assistant Construction Supervisor with job description
Section 17 & 18 General Administrative Regulations 6 & 7	<b>*Designation of Health &amp; Safety Representatives</b>	More than 20 employees - one H&S Representative, one additional H&S Rep. for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified in terms of GAR 6 & 7 Meaningful H&S Rep. reports. Reports auctioned by Management.
Section 19 & 20 General Administrative Regulations 5	<b>*Health &amp; Safety Committee/s</b>	H&S Committee/s established. All H&S Reps shall be members of H&S Committees Additional members are appointed in writing. Meetings held monthly, Minutes kept. Auctioned by Management.
Section 37(1) & (2)	<b>*Agreement with Man dataries/ (Sub-)Contractors</b>	Written agreement with (Sub-)Contractors List of (Sub-)Contractors displayed. Proof of Registration with Compensation Insurer/Letter of Good Standing Construction Supervisor designated Written arrangements re. H&S Reps & H&S Committee Written arrangements re. First Aid
Section 24 & General Admin. Regulation 8 COID Act Sect.38, 39 & 41	<b>*Reporting of Incidents (Dept. of Labour)</b>	Incident Reporting Procedure displayed. All incidents in terms of Sect. 24 reported to the Provincial Director, Department of Labour, within 3 days. (Annexure 1?)(WCL 1 or 2) and to the Client and/or its Agent on its behalf Cases of Occupational Disease Reported Copies of Reports available on Site Record of First Aid injuries kept
General Admin. Regulation 9	<b>*Investigation and Recording of Incidents</b>	All injuries which resulted in the person receiving medical treatment other than first aid, recorded and investigated by investigator designated in writing. Copies of Reports (Annexure 1) available on Site Tabled at H&S Committee meeting Action taken by Site Management.
Construction. Regulation 8	<b>Fall Prevention &amp; Protection</b>	Competent person appointed to draw up and supervise the Fall Protection Plan Proof of appointees competence available on Site

		<p><b>Risk Assessment carried out for work at heights</b></p> <p><b>Fall Protection Plan drawn up/updated</b></p> <p><b>Available on Site</b></p>
Construction. Regulation 8(5)	<b>Roof work</b>	<p>Competent person appointed to plan &amp; supervise Roof work.</p> <p>Proof of appointees competence available on Site</p> <p>Risk Assessment carried out</p> <p>Roof work Plan drawn up/updated</p> <p>Roof work inspect before each shift. Inspection register kept</p> <p>Employees medically examined for physical &amp; psychological fitness.</p> <p>Written proof on site</p>
Construction. Regulation 9	<b>Structures</b>	<p>Information re. the structure being erected received from the Designer including:</p> <ul style="list-style-type: none"> <li>- geo-science technical report where relevant</li> <li>- the design loading of the structure</li> <li>- the methods &amp; sequence of construction</li> <li>- anticipated dangers/hazards/special measures to construct safely</li> </ul> <p>Risk Assessment carried out</p> <p>Method statement drawn up</p> <p>All above available on Site</p> <p>Structures inspected before each shift. Inspections register kept</p>
Construction. Regulation 10	<b>Formwork &amp; Support work</b>	<p>Competent person appointed in writing to supervise erection, maintenance, use and dismantling of Support &amp; Formwork</p> <p>Design drawings available on site</p> <p>Risk Assessment carried out</p> <p>Support &amp; Formwork inspected:</p> <ul style="list-style-type: none"> <li>- before use/inspection</li> <li>- before pouring of concrete</li> <li>- weekly whilst in place</li> <li>- before stripping/dismantling.</li> </ul> <p>- Inspection register kept</p>
Construction. Regulation 14	<b>Scaffolding</b>	<p>Competent persons appointed in writing to:</p> <ul style="list-style-type: none"> <li>- erect scaffolding (Scaffold Erector/s)</li> <li>- act as Scaffold Team Leaders</li> <li>- inspect Scaffolding weekly and after inclement weather (Scaffold Inspector/s)</li> </ul> <p>Written Proof of Competence of above appointees available on Site</p> <p>Copy of SABS 085 available on Site</p> <p>Risk Assessment carried out</p> <p>Inspected weekly/after bad weather. Inspection register/s kept</p>
Construction. Regulation 11	<b>Excavations</b>	<p>Competent person/s appointed in writing to supervise and inspect excavation work</p> <p>Written Proof of Competence of above appointee/s available on Site</p> <p>Risk Assessment carried out</p> <p>Inspected:</p> <ul style="list-style-type: none"> <li>- before every shift</li> <li>- after any blasting</li> <li>- after an unexpected fall of ground</li> <li>- after any substantial damage to the shoring</li> <li>- after rain. Inspections register kept</li> </ul> <p>Method statement developed where explosives will be/ are used</p>
Construction. Regulation 19	<b>Explosive Powered Tools</b>	<p>Competent person appointed to control the issue of the Explosive Powered Tools &amp; cartridges and the service, maintenance and cleaning. Register kept of above</p> <p>Empty cartridge cases/nails/fixing bolts returns recorded</p> <p>Cleaned daily after use <b>Work areas are demarcated!</b></p>

<b>Construction. Regulation 22/Electrical Machinery Regulations 9 &amp; 10/ Electrical Installation Regulations</b>	<b>*Inspection &amp; Maintenance of Electrical Installation &amp; Equipment (including portable electrical tools)</b>	Competent person appointed in writing to inspect/test the installation and equipment. Written Proof of Competence of above appointee available on Site. Inspections: - Electrical Installation & equipment inspected after installation, after alterations and quarterly. Inspection Registers kept Portable electric tools, electric lights and extension leads must be uniquely identified/numbered. Weekly visual inspection by User/Issuer/Storeman. Register kept.
Construction. Regulation 26/ General Safety Regulation 8(1)(a)	<b>*Designation of Stacking &amp; Storage Supervisor.</b>	Competent Person/s with specific knowledge and experience designated to supervise all Stacking & Storage Written Proof of Competence of above appointee available on Site
Construction. Regulation 27/ Environmental Regulation 9	<b>*Designation of a Person to Co-ordinate Emergency Planning And Fire Protection</b>	Person/s with specific knowledge and experience designated to co-ordinate emergency contingency planning and execution and fire prevention measures Emergency Evacuation Plan developed: - Drilled/Practiced - Plan & Records of Drills/Practices available on Site Fire Risk Assessment carried out All Fire Extinguishing Equipment identified and on <b>register</b> . Inspected weekly. Inspection Register kept Serviced annually
General Safety Regulation 3	<b>*First Aid</b>	Every workplace provided with sufficient number of First Aid boxes. (Required where 5 persons or more are employed) First Aid freely available Equipment as per the list in the OH&S Act. One qualified First Aider appointed for every 50 employees. (Required where more than 10 persons are employed) List of First Aid Officials and Certificates Name of person/s in charge of First Aid box/es displayed. Location of First Aid box/es clearly indicated. Signs instructing employees to report all Injuries/illness including first aid injuries
General Safety Regulation 2	<b>Personal Safety Equipment (PSE)</b>	PSE Risk Assessment carried out Items of PSE prescribed/use enforced Records of Issue kept Undertaking by Employee to use/wear PSE PSE remain property of Employer, not to be removed from premises GSR 2(4)
General Safety Regulation 9	<b>*Inspection &amp; Use of Welding/Flame Cutting Equipment</b>	Competent Person/s with specific knowledge and experience designated to Inspect Electric Arc, Gas Welding and Flame Cutting Equipment Written Proof of Competence of above appointee available on Site All new vessels checked for leaks, leaking vessels NOT taken into stock but returned to supplier immediately Equipment identified/numbered and entered into a register Equipment inspected weekly. Inspection Register kept Separate, purpose made storage available for full and empty vessels
Hazardous Chemical Substances (HCS) Regulations Construction Regulation 23	<b>Control of Storage &amp; Usage of HCS and Flammables</b>	Competent Person/s with specific knowledge and experience designated to Control the Storage & Usage of <b>HCS</b> (including Flammables) Written Proof of Competence of above appointee available on Site Risk Assessment carried out Register of HCS kept/used on Site Separate, purpose made storage available for full and empty

		<b>containers</b>
Vessels under Pressure Regulations	<b>Vessels under Pressure (VUP)</b>	Competent Person/s with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections & testing of VUP's Written Proof of Competence of above appointee available on Site Risk Assessment carried out Certificates of Manufacture available on Site Register of VUP's on Site Inspections & Testing by Approved Inspection Authority (AIA): - after installation/re-erection or repairs - every 36 months. - Register/Log kept of inspections, tests. Modifications & repair
General Safety Regulation 13A	<b>Inspection of Ladders</b>	Competent person appointed in writing to inspect Ladders Ladders inspected at arrival on site and weekly there after. Inspections register kept Application of the types of ladders (wooden, aluminium etc.) regulated by training and inspections and noted in register
General Safety regulation 13B	<b>Ramps</b>	Competent person appointed in writing to Supervise the erection & inspection of Ramps. Inspection register kept. Daily inspected and noted in register

#### 14.2 Education & Training

Subject	Requirement
*Company OH&S Policy Section 7(1)	Policy signed by CEO and published/Circulated to Employees Policy displayed on Employee Notice Boards Management and employees committed.
*Company/Site OH&S Rules (Section 13(a))	Rules published Rules displayed on Employee Notice Boards Rules issued and employees effectively informed or trained: written proof Follow-up to ensure employees understand/adhere to the policy and rules.
*Induction & Task Safety Training (Section 13(a))	All new employees receive OH&S Induction Training. Training includes Task Safety Instructions. Employees acknowledge receipt of training. Follow-up to ensure employees understand/adhere to instructions.
*General OH&S Training (Section 13(a))	All current employees receive specified OH&S training: written proof Operators of Plant & Equipment receive specified training Follow-up to ensure employees understand/adhere to instructions.
*Occupational Health & Safety Promotion	<u>Incident Experience Board indicating e.g.</u> * No. of hours worked without an Injury * No. of days worked without an Injury Mission, Vision and Goal Star Grading - Board kept up to date. Safety Posters displayed & changed regularly Employee Notice Board for OH&S Notices. Site OH&S Competition. Company OH&S Competition. Participation in Regional OH&S Competition Suggestion scheme.

#### 14.3 Public Safety, Security Measures & Emergency Preparedness

Subject	Requirement
*Notices & Signs	Notices & Signs at entrances / along perimeters indicating <b>"No Unauthorised Entry"</b> . Notices & Signs at entrance instructing visitors and non - employees what to do, where to go and where to report on entering the site/yard with directional signs. e.g. <b>"Visitors to report to Office"</b> Notices & Signs posted to warn of overhead work and other hazardous activities. e.g. <b>General Warning Signs</b>
Site	Nets, Canopies, Platforms, Fans etc. to protect members of the public passing / entering the site.

<b>Safeguarding Security Measures</b>	Access control measures/register in operation Security patrols after hours during weekends and holidays Sufficient lighting after dark Guard has access to telephone/ mobile/other means of emergency communication
<b>Emergency Preparedness</b>	Emergency contact numbers displayed and made available to Security & Guard Emergency Evacuation instructions posted up on all notice boards (including employees' notice boards) Emergency contingency plan available on site/in yard Doors open outwards/unobstructed Emergency alarm audible all over (including in toilets)
<b>Emergency Drill &amp; Evacuation</b>	Adequate No. of employees trained to use Fire Fighting Equipment. Emergency Evacuation Plan available, displayed and practiced. <b>(See Section 1 for Designation &amp; Register)</b>

#### 14.4 Personal Protective Equipment

Subject	Requirement
*PPE needs analysis	Need for PPE identified and prescribed in writing. PPE remain property of Employer, not to be removed from premises GSR 2(4)
*Head Protection	All persons on site wearing Safety Helmets including Sub-contractors and Visitors (where prescribed)
*Foot Protection	All employees on site wearing Safety Footwear including Gumboots for concrete / wet work and non-slip shoes for roof work. Visitors to wear same upon request or where prescribed
*Eye and Face Protection	<u>Eye and Face (also Hand and Body) Protection</u> (Goggles, Face Shields, Welding Helmets etc.) used when operating the following: <ul style="list-style-type: none"> <li>* Jack/ Kango Hammers</li> <li>* Angle / Bench Grinders</li> <li>* Electric Drills (Overhead work into concrete / cement / bricks)</li> <li>* Explosive Powered tools</li> <li>* Concrete Vibrators / Pokers</li> <li>* Hammers &amp; Chisels</li> <li>* Cutting / Welding Torches</li> <li>* Cutting Tools and Equipment</li> <li>* Guillotines and Benders</li> <li>* Shears</li> <li>* Sanders and Sanding Machines</li> <li>* CO2 and Arc Welding Equipment</li> <li>* Skill / Bench Saws</li> <li>* Spray Painting Equipment etc.</li> </ul>
*Hearing Protection	<u>Hearing Protectors</u> (Muffs, Plugs etc.) used when operating the following: <ul style="list-style-type: none"> <li>* Jack / Kango Hammers</li> <li>* Explosive Powered Tools</li> <li>* Wood/Aluminium Working Machines e.g. saws, planers, routers</li> </ul>
*Hand Protection	<u>Protective Gloves</u> worn by employees handling / using: <ul style="list-style-type: none"> <li>* Cement / Bricks / Steel / Chemicals</li> <li>* Welding Equipment</li> <li>* Hammers &amp; Chisels</li> <li>* Jack / Kango Hammers etc.</li> </ul>
*Respiratory Protection	Suitable/efficient prescribed <u>Respirators</u> worn correctly by employees handling / using: <ul style="list-style-type: none"> <li>* Dry cement</li> <li>* Dusty areas</li> <li>* Hazardous chemicals</li> <li>* Angle Grinders</li> <li>* Spray Painting etc.</li> </ul>



*Fall Prevention Equipment	Suitable <u>Safety Belts</u> / Fall Arrest Equipment correctly used by persons working on / in unguarded, elevated positions e.g.: * Scaffolding * Riggers * Lift shafts * Edge work * Ring beam edges etc. Other methods of fall prevention applied e.g. catch nets
*Protective Clothing	All jobs requiring protective clothing ( Overalls, Rain Wear, Welding Aprons etc.) Identified and clothing worn.
*PPE Issue & Control	Identified Equipment issued free of charge. All PPE maintained in good condition. (Regular checks). Workers instructed in the proper use & maintenance of PPE. Commitment obtained from wearer accepting conditions and to wear the PPE. Record of PPE issued kept on H&S File. PPE remain property of Employer, not to be removed from premises GSR 2(4)

#### 14.5 Housekeeping

Subject	Requirement
*Scrap Removal System	All items of Scrap/Unusable Off-cuts/Rubble and redundant material removed from working areas on a regular basis. (Daily) Scrap/Waste removal from heights by chute/hoist/crane. Nothing thrown/swept over sides. Scrap disposed of in designated containers/areas Removal from site/yard on a regular basis.
Stacking & Storage  (See Section 1 for Designation & Register)	<u>Stacking:</u> * Stable, on firm level surface/base. * Prevent leaning/collapsing * Irregular shapes bonded * Not exceeding 3x the base * Stacks accessible * Removal from top only.  <u>Storage:</u> * Adequate storage areas provided. * Functional – e.g. demarcated storage areas/racks/bins etc. * Special areas identified and demarcated e.g. flammable gas, cement etc. * Neat, safe, stable and square. * Store/storage areas clear of superfluous material. * Storage behind sheds etc. neat/under control. * Storage areas free from weeds, litter etc.
*Waste Control/Reclamation	Re-usable off-cuts and other re-usable material removed daily and kept to a minimum in the work areas. All re-usable materials neatly stacked/stored in designated areas. (Nails removed/bent over in re-usable timber). Issue of hardware/nails/screws/cartridges etc. controlled and return of unused items monitored.
Sub-contractors (Housekeeping)	Sub-contractors required to comply with Housekeeping requirements.

#### 14.6 Working at Heights (including roof work)

Subject	Requirement
Openings	Unprotected openings adequately guarded/fenced/barricaded/catch nets installed
	Roof work discontinued when bad/hazardous weather Fall protection measures (including warning notices) when working close to edges or on fragile roofing material Covers over openings in roof of robust construction/secured against displacement

**14.7 Scaffolding / Formwork / Support Work**

<b>Subject</b>	<b>Requirement</b>
Access/System Scaffolding	Foundation firm / stable Sufficient bracing. Tied to Structure/prevented from side or cross movement Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Complying with OH&S Act/SABS 085
Free Standing Scaffolding	Foundation firm / stable Sufficient bracing. Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Height to base ratio correct Outriggers used /tied to structure where necessary Complying with OH&S Act/SABS 085
*Mobile Scaffolding	Wheels / swivels in good condition Brakes working and applied. Height to base ratio correct. Outriggers used where necessary Complying with OH&S Act/SABS 085
Formwork / Support Work	All components in good condition. Foundation firm / stable. Adequate bracing / stability ensured. Good workmanship / uprights straight and plumb. Good cantilever construction. Safe access provided. Areas under support work tidy. Same standards as for system scaffolding.
Edges & Openings	Edges barricaded to acceptable standards. Manhole openings covered / barricaded. Openings in floor / other openings covered, barricaded/fenced. Stairs provided with handrails. Lift shafts barricaded / fenced off.

**14.8 Ladders**

<b>Subject</b>	<b>Requirement</b>
*Physical Condition / Use & Storage	Stepladders - hinges/stays/braces/stiles in order. Extension ladders - ropes/rungs/stiles/safety latch/hook in order. Extension / Straight ladders secured or tied at the bottom / top. No joined ladders used Wooden ladders are never painted except with varnish Aluminium ladders NOT to be used with electrical work All ladders stored on hooks / racks and not on ground. Ladders protrude 900 mm above landings / platforms / roof. Fixed ladders higher than 5 m have cages/Fall arrest system

**14.9 Electricity (as part of, or additional to the manual "Safety & Switching Procedures for Electrical Installations"- see attached document)**

Subject	Requirement
*Electrical Distribution Boards & Earth Leakage	<p>Colour coded / numbered / symbolic sign displayed.</p> <p>Area in front kept clear and unobstructed.</p> <p>Fitted with inside cover plate / openings blanked off / no exposed “live” conductors / terminals/Door kept close</p> <p>Switches / circuit breakers identified.</p> <p>Earth leakage protection unit fitted and operating.</p> <p>Tested with instrument: Test results within 15 – 30 milliamps</p> <p>Aperture/Opening/s provided for the plugging in and removal of extension leads without the need to open the door</p> <p>Apertures and openings used for extension leads to be protected against the elements and especially rain</p>
*Electrical Installations & Wiring	<p>Temporary wiring / extension leads in good condition / no bare or exposed wires.</p> <p>Earthing continuity / polarity correct:</p> <p><b>Looking at the open connectors to connect the wiring, the word “Brown” has the letter ‘R’ in it, so the <u>b’R’own</u> wire connects to the ‘R’ight hand connector. “Blue” has the letter ‘L’ in it, so the <u>b’L’ue</u> wire connects to the ‘L’eft hand connector.</b></p> <p>Cables protected from mechanical damage and moisture.</p> <p>Correct loading observed e.g. no heating appliance used from lighting circuit etc.</p> <p>Light fittings/lamps protected from mechanical damage/moisture.</p> <p>Cable arrestors in place and used inside plugs</p>
*Physical condition of Electrical Appliances & Tools	<p><u>Electrical Equipment and Tools:</u> (includes all items plugging in to a 16 Amp supply socket)</p> <p>Insulation / casing in good condition.</p> <p>Earth wire connected/intact where not of double insulated design</p> <p>Double insulation mark indicates that no earth wire is to be connected.</p> <p>Cord in good condition/no bare wires/secured to machine &amp; plug.</p> <p>Plug in good condition, connected correctly and correct polarity.</p>

#### 14.10 Emergency and Fire Prevention and Protection

Subject	Requirement
*Fire Extinguishing Equipment	<p>Fire Risks Identified and on record</p> <p><u>The correct and adequate Fire Extinguishing Equipment available for:</u></p> <ul style="list-style-type: none"> <li>* Offices</li> <li>* General Stores</li> <li>* Flammable Store</li> <li>* Fuel Storage Tank/s and catchment well</li> <li>* Gas Welding / Cutting operations</li> <li>* Where flammable substances are being used / applied.</li> <li>* Equipment Easily Accessible</li> </ul>
*Maintenance	Fire equipment checked minimum monthly, serviced yearly
*Location & Signs	<p><u>Fire Extinguishing Equipment:</u></p> <ul style="list-style-type: none"> <li>* Clearly visible</li> <li>* Unobstructed</li> <li>* Signs posted including “No Smoking” / “No Naked Lights” where required. (Flammable store, Gas store, Fuel tanks etc.)</li> </ul>
* Storage Issue & Control of Flammables (incl. Gas cylinders)	<p>Storage Area provided for flammables with suitable doors, ventilation, bund etc.</p> <p>Flammable store neat / tidy and no Class A combustibles. Decanting of flammable substances carried out in ignition free and adequately ventilated area. Container bonding principles applied</p> <p>Only sufficient quantities issued for one task or one day’s usage</p> <p>Separate, special gas cylinder store/storage area.</p> <p>Gas Cylinders stored / used / transported upright and secured in trolley/cradle/structure and ventilated.</p> <p>Types of Gas Cylinders clearly identified as well as the storage area and stored separately.</p> <p>Full cylinders stored separately from empty cylinders.</p> <p>All valves, gauges, connections, threads of all vessels to be checked regularly for leaks.</p>

	Leaking acetylene vessels to be returned to the supplier IMMEDIATELY.
*Storage, Issue & Control of Hazardous Chemical Substances (HCS)	<p>HCS storage principles applied: products segregated</p> <p>Only approved, non-expired HCS to be used</p> <p>Only the prescribed PPE shall be used as the minimum protection</p> <p>Provision made for leakage/spillage containment and ventilation</p> <p>Emergency showers/eye wash facilities provided</p> <p>HCS under lock &amp; key controlled by designated person</p> <p>Decanted/issued in containers as prescribed with information/warning labels</p> <p>Disposal of unwanted HCS by accredited disposal agent</p> <p>No dumping or disposal of any HCS on or inside the storage area or anywhere else on the project site</p> <p>All vessels or containers to be regularly checked for leaks</p>

#### 14.11 Excavations

Subject	Requirement
Excavations deeper than 1m.	<p>Shored / Braced to prevent caving / falling in.</p> <p>Provided with an access ladder.</p> <p>Excavations guarded/barricaded/lighted after dark in public areas</p> <p>Soil dumped at least 1 m away from edge of excavation</p> <p>On sloping ground soil dumped on lower side of excavation</p> <p>All excavations are subject to daily inspections</p>

#### 14.12 Tools

Subject	Requirement
*Hand Tools	<p><u>Shovels / Spades / Picks:</u></p> <ul style="list-style-type: none"> <li>* Handles free from cracks and splinters</li> <li>* Handles fit securely</li> <li>* Working end sharp and true</li> </ul> <p><u>Hammers:</u></p> <ul style="list-style-type: none"> <li>* Good quality handles, no pipe or reinforcing steel handles.</li> <li>* Handles free from cracks and splinters</li> </ul> <p>Handles fit securely</p> <p><u>Chisels:</u></p> <ul style="list-style-type: none"> <li>* No mushroomed heads / heads chamfered</li> <li>* Not hardened</li> <li>* Cutting edge sharp and square</li> </ul> <p><u>Saws:</u></p> <ul style="list-style-type: none"> <li>* Teeth sharp and set correctly</li> <li>* Correct saw used for the job</li> </ul>
*Explosive Powered Tools.	<p>Only used by trained / authorised personnel.</p> <p>Prescribed warning signs placed / displayed where tool is in use.</p> <p>Work area must be properly isolated/demarcated during use of tool.</p> <p>Inspected at least monthly by competent person and results recorded.</p> <p>Issue and return recorded including cartridges / nails and unused cartridges / nails / empty shells recorded.</p> <p>Cleaned daily after use.</p>

#### 14.13 Transport & Materials Handling Equipment

Subject	Requirement
*Site Vehicles	<p>All Site Vehicles, Dumpers, Bobcats, Loaders etc; checked daily before use by driver / operator.</p> <p>Inventory of vehicles used/operated on site</p> <p>Inspection by means of a checklist / results recorded.</p> <p>No persons riding on equipment not designed or designated for passengers.</p> <p>Site speed limit posted, enforced and not exceeded.</p> <p>Drivers / Operators trained / licensed and carrying proof.</p> <p>No unauthorised persons allowed to drive / operate equipment.</p>
Conveyors	<p>Conveyor belt nip points and drive gear guarded.</p> <p>Emergency stop/lever/brake fitted, clearly marked &amp; accessible and tested to be functional under full load.</p>

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#### 14.14 Site Plant and Machinery

Subject	Requirement
Brick Cutting Machine	Operator Trained. Only authorised persons use the machine. Emergency stop switch clearly marked and accessible. Area around the machine dry and slip/trip free/clear of off-cuts All moving drive parts guarded/electrical supply cable protected Operator using correct PPE - eye/face/hearing/foot/hands/body.
*Electric Arc Welder	Welder Trained. Only authorised / trained persons use welder. Earth cable adequately earthed to work. Electrode holder in good condition/safe Cables, clamps & lugs/connectors in good condition. Area in which welding machine is used is dry/protected from wet. Welder using correct PPE - eye/ face/foot/body/respirator. Correct transparent screens & warning signs placed
*Compressors	Relief valves correctly set and locked / sealed. Maximum Safe Working Pressure (MSWP) indicated on face of pressure gauge: not on glass cover. All drives adequately guarded. Receiver/lines drained daily Hoses good condition/clamped, not wired Compressed air NEITHER used to dust off clothing/PPE/ and work areas NOR on bare skin
Concrete Mixer / Batch Plant	Top platform provided with guardrails. Dust abatement methods in use. Operators using correct PPE - eye / hands / respirators. All moving drive parts guarded. Emergency stops identified / indicated and accessible. Area kept clean/dry/and free from tripping and slipping hazards. Operators overseer identified and crane signals displayed and used.
*Gas Welding / Flame Cutting Equipment	Only authorised/trained persons use the equipment. Torches and gauges in good condition. Flashback arrestors fitted at cylinders and gauges. Hoses in good condition/correct type/all connections with clamps Cylinders stored, used and transported in upright position, secured in trolley / cradle / to structure. All cylinders regularly checked for leaks, leaking cylinders returned immediately Fire prevention/control methods applied/hot work permits.

#### 14.15 Plant & Storage Yards/Site Workshops Specifics

Subject	Requirements
Section 8(2)(1) General Machinery Regulation 2(1): <b>Supervision of the Use &amp; Maintenance of Machinery</b>	Person/s with specific knowledge and experience designated in writing to Supervise the Use & Maintenance of Machinery Critical items of Machinery identified/numbered/placed on register/inventory Inspection/maintenance schedules for abovementioned Inspections/maintenance carried out to above schedules Results recorded
General Machinery Regulation 9(2): <b>Notices re. Operation of Machinery</b>	Schedule D Notice posted in Work areas
Vessels under Pressure Regulation 13(1)(b): <b>Supervision of the Use &amp;</b>	Person/s with specific knowledge and experience designated in writing to Supervise the Use & Maintenance of VuP's VuP's identified/numbered/placed on register/Manufacturers plate intact

<b>Maintenance of Vessels under Pressure (VuP)</b>	Inspection/maintenance schedules for abovementioned Inspections/maintenance carried out to above schedules Results recorded/Test certificates available
<b>Lock-out Procedure</b>	Lock-out procedure in operation
<b>Ergonomics</b>	Ergonomics survey conducted – results on record Survey results applied
<b>Demarcation &amp; Colour Coding</b>	Demarcation principles applied All services, pipes, electrical installation, stop-start controls, emergency controls etc. colour coded to own published or SABS standard Employees trained to identify colour coding
<b>Portable &amp; Bench Grinders</b>	Area around grinder clear/trip/slip free Bench grinders mounted securely - grinder generally in good condition - no excessive vibration On/Off switch/button clearly demarcated/accessible Adequate guards in place Toolrest – secure/square/max. 2 mm gap, perpendicular to drive shaft Stone/disk - correct type and size/mounted correctly/dressed Use of Eye protection enforced
<b>Battery Storage &amp; Charging</b>	Adequately ventilated, ignition free room/area/no smoking sign/s Batteries placed on rubber/wooden surface Emergency shower/eye wash provided No acid storage in area Prescribed methods in place and adhered to when charging batteries
<b>Ancillary Lifting Equipment</b>	Chain Blocks/Tirfors/jacks/mobile gantries etc. identified/ numbered on register Chains in good condition/links no excessive wear/checked daily Lifting hooks – throat pop marked/safety latch fitted SWL/MML marked/displayed
<b>Presses/Guillotines/Shears</b>	Only operated by trained/authorised persons Interlocks/lock-outs fitted/PPE worn or used at all times

#### 14.16 Workplace Environment, Health and Hygiene

<b>Subject</b>	<b>Requirement</b>
<b>*Lighting</b>	Adequate lighting in places where work is being executed e.g. stairwells and basements. Light fittings placed / installed causing no irritating/blinding glare. Stroboscopic effect eliminated (not only reduced) where moving objects or machinery is used
<b>*Ventilation</b>	Adequate ventilation / extraction / exhausting in hazardous areas e.g. chemicals / adhesives / welding / petrol or diesel/ motors running and in confined spaces / basements.
<b>*Noise</b>	Tasks identified where noise levels exceeds 85 dB at any one time. All reasonable steps taken to reduce noise levels at the source. Hearing protection used where noise levels could not be reduced to below 85 dB.
<b>*Heat Stress</b>	Measures in place to prevent heat exhaustion in heat stress problem areas e.g. steel decks, when the WBGT index reaches 30. (See Environmental Regulation 4) Cold drinking water readily available at all times.
<b>*Ablutions</b>	Sufficient hygiene facilities provided - 1 toilet per 30 employees (National Building Regulations prescribe chemical toilets for Construction sites) Toilet paper available. Sufficient showers provided. Facilities for washing hands provided Soap/cleaning agent available for washing hands Means of drying hands available Lock-up changing facilities / area provided. Ablution facilities kept hygienic and clean.
<b>*Eating / Cooking Facilities</b>	Adequate storage facilities provided. Weather protected eating area provided, separate from changing area Refuse bins with lids provided.

	Facilities kept clean and hygienic.
*Pollution of Environment	Measures in place to minimize dust generation. Accumulation or littering of empty cement pockets, plastic wrapping / bags, packing materials etc. prevented. Spillage / discarding of oil, chemicals and diesel into storm water and other drains or into existing or newly dug holes/cavities on site expressly prohibited.
*Hazardous Chemical Substances	All substances identified and list available e.g. acids, flammables, poisons etc. Material Safety Data Sheets (MSDS) indicating hazardous properties and emergency procedures in case of incident on file and readily available. Substances stored safely. Expiry dates meticulously checked where applicable

## 15. THE PRINCIPAL CONTRACTOR'S GENERAL DUTIES

The Principal Contractor shall at all times maintain his status of an “employer” as referred to in the Act, and will abide by his/her responsibilities, duties and functions as per the requirements of the Act and Regulations with specific reference to Section 8 of the Act.

The Principal Contractor shall keep, and on demand make available, a copy of the Act on site at all times and in addition to that he/she will introduce and maintain a file titled “Health and Safety File”, or other record in permanent form, which shall contain all relevant aspects and information as contemplated in the Construction Regulations. He/she will make this file available to the client or his representative whenever necessary or on request to an interested party.

## 16. THE PRINCIPAL CONTRACTOR'S SPECIFIC DUTIES

The Principal Contractor's specific duties in terms of these specifications are detailed in the Construction Regulations as published under government notice No.R1010 dated 18 July 2003.

The Principal Contractor is specifically referred to the following elements of the Construction Regulations:

- Regulation No. 1 - Definitions
- Regulation No. 2 - Scope of application
- Regulation No. 3 - Notification of construction work
- Regulation No. 5 - Principal Contractor and Contractor
- Regulation No. 6 - Supervision of construction work
- Regulation No. 7 - Risk Assessment
- Regulation No. 26 - Stacking & Storage on construction sites
- Regulation No. 28 - Construction welfare facilities
- Regulation No. 29 - Approved Inspection authorities
- Regulation No. 30 - Offences and penalties

The Principal Contractor shall ensure compliance to the Act and its Regulations and specifically to the above regulations, and document each record in the Health and Safety File.

## 17. THE PRINCIPAL CONTRACTOR'S SPECIFIC RESPONSIBILITIES WITH REGARD TO HAZARDOUS ACTIVITIES

The following activities are identifiable as hazardous in terms of the Construction Regulations.

The contractor shall execute the activities in accordance with the following Construction Regulations and other applicable regulations of the Act:

- Regulation No. 8 - Fall protection

Regulation No. 9	- Structures
Regulation No. 10	- Formwork and support work
Regulation No. 11	- Excavation work
Regulation No. 12	- Demolition work
Regulation No. 13	- Tunneling
Regulation No. 14	- Scaffolding
Regulation No. 15	- Suspended platforms
Regulation No. 16	- Boatswain's chairs
Regulation No. 17	- Material hoists
Regulation No. 18	- Batch plants
Regulation No. 19	- Explosive powered tools
Regulation No. 20	- Cranes
Regulation No. 21	- Construction vehicles & mobile plant.
Regulation No. 22	- Electrical installations and machinery on construction sites
Regulation No. 23	- Use and temporary storage of flammable liquids on construction sites
Regulation No. 24	- Water environments
Regulation No. 25	- Housekeeping on construction sites
Regulation No. 27	- Fire precautions on construction sites.

All these will be read in conjunction with the relevant regulations and health and safety standards as required by the Act. All documents and records required by the Construction Regulations will be kept in the Health and Safety File and will be made available at any time when required by the client or his representative, or on request to an interested party.

## **18. GENERAL NOTES TO THE PRINCIPAL CONTRACTOR**

### **Legal Framework**

Part of legal obligations

The more important Acts and relevant subordinate/secondary legislation as well as other (inter alia Local Government) legislation that also apply to the State as well as to State owned buildings and premises: -

- (i) The latest issue of SABS 0142: "Code of Practice for the Wiring of Premises"
- (ii) The Local Government Ordinance 1939 (Ordinance 17 of 1939) as amended and the municipal by-laws and any special requirements of the local supply authority
- (iii) The Fire Brigade Services Act 1987, Act 99 of 1987 as amended
- (iv) The National Building Regulations and Building Standards Act 1977 (Act 103 of 1977) as amended and relevant proclaimed Regulations (SABS 0400)
- (v) The Post Office Act 1958 (Act 44 of 1958) as amended
- (vi) The Electricity Act 1984, Act 41 of 1984
- (vii) The Regulations of Local Gas Board(s)
- (viii) Legislation pertaining to water usage and the environment
- (ix) Legislation governing the use of equipment, which may emit radiation (e.g. X-Rays etc.)
- (x) Common Law

## **19. HOUSE KEEPING**



Good housekeeping will be maintained at all times as per Construction Regulation No. 25. Poor housekeeping contributes to three major problems, namely, costly or increased accidents, fire or fire hazards and reduction in production. Good housekeeping will enhance production time.

Particular emphasis is to be placed on the following crucial elements of a construction site:

- Phase priorities and production/plant layout
- Enclosures
- Pits, openings and shoring
- Storage facilities
- Effective, sufficient and maintained lighting or illumination
- Principal sources of injuries e.g. stairways, runways, ramps, loose building material
- Oil, grease, water, waste, rubble, glass, storm water
- Colour coding
- Demarcations
- Pollution
- Waste disposal
- Ablution and hygiene facilities
- First aid

In promotion of environmental control all waste, rubble, scrap etc, will be disposed of at a registered dump site and records will be maintained. Where it is found to be impractical to use a registered dump site or it is not available, the Principal Contractor will ensure that the matter is brought to record with the client or his representative, after which suitable, acceptable alternatives will be sought and applied.

Dross and refuse from metals, and waste matters or by-products whose nature is such that they are poisonous or capable of fermentation, putrefaction or constituting a nuisance shall be treated or disposed of by methods approved of by an inspector.

NOTE: No employer (Principal Contractor) shall require or permit any person to work at night or after hours unless there is adequate, suitable artificial lighting.

## **20. LOCKOUT SYSTEMS**

A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, plant or machinery is out of commission for any period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable.

Physical/mechanical lock-out systems shall be part of the safety system and included in training. Lockouts shall be tagged and the system tested before commencing with any work or repairs.

## **21. INCIDENT INVESTIGATION**

Inspection and reporting is the best way in which a responsible contractor can control his area of responsibility. All incidents therefore, whether it gave rise to loss, injury, damage or not, shall be investigated and the results recorded in the Health and Safety File. (Attached GAR 9)

## **22. GENERAL**

The project under control of the Principal Contractor shall be subject to periodic health and safety audits that will be conducted by the client at intervals agreed upon between the Principal Contractor and the client, provided such intervals will not exceed periods longer than one month. The Principal Contractor is to ensure that he/she and all persons under his control on the construction site shall adhere to the above specifications, as non-conformance will lead to the client taking action as directed by Construction Regulation 4.1(e). The Principal Contractor should note that he/she shall be held liable for any anomalies including costs and resulting deficiencies due to delays caused by non-conformance and/or non-compliance to the above Health and Safety Specifications and the Health and Safety Plan based on these specifications.

## **23. IMPORTANT LISTS AND RECORDS TO BE KEPT**

The following are lists of several records that are to be kept in terms of the Construction Regulations. The lists are:

- 1 List of appointments
- 2 List of record keeping responsibilities
- 3 Inspection checklist

These lists and documents are to be used as a point of reference to determine which components of the Act would be applicable to a particular site or task or project, as was intended under paragraph 1 (“Preamble”) above.

#### 1. LIST OF APPOINTMENTS

ITEM	REGULATION	APPOINTMENT	RESPONSIBLE PERSON
1.	4(1)(c)	Principal contractor for each phase or project	Client
2.	5.(3)(b)	Contractor	Principal Contractor
3.	5(11)	Contractor	Contractor
4.	6(1)	Construction supervisor	Contractor
5.	6(2)	Construction supervisor sub-ordinates	Contractor
6.	6(6)	Health and Safety Officer	Contractor
7.	7(1)	Person to Carry Out Risk Assessment	Contractor
8.	7(4)	Trainer/Instructor	Contractor
9.	8(1)(a)	Fall Protection Planner	Contractor
10.	10 (a)	Formwork & Support Work Supervisor	Contractor
11.	10(e) + (f)	Formwork & Support Work Examiner	Contractor
12.	11(1)	Excavation Supervisor	Contractor
13.	11(3)(b)(ii)(b)	Professional Engineer or Technologist	Contractor
14.	11(3)(k)	Explosives Expert	Contractor
15.	12(1)	Supervisor Demolition Work	Contractor
16.	12(2) + (3)	Demolition Expert	Contractor
17.	12(11)	Explosives Expert	Contractor
18.	14(2)	Scaffold Supervisor	Contractor
19.	15(1)	Suspended Platform Supervisor	Contractor
20.	15(2)(c)	Compliance Plan Developer	Contractor
26.	19(2)(b)	Power Tool Expert	Contractor
27.	19.2 (g) (i)	Power Tool Controller	Contractor
31.	22(d)	Temporary Electrical Installations Inspector	Contractor
32.	22 (e)	Temporary Electrical Installations Controller	Contractor
33.	26 (a)	Stacking and Storage Supervisor	Contractor
34.	27 (h)	Fire Equipment Inspector	Contractor

#### 2. LIST OF RECORD KEEPING RESPONSIBILITIES

ITEM	CR	RECORD TO BE KEPT	RESPONSIBLE PERSON
1.	3(3)	Notification to Provincial Director – Annexure A Available on site	Principal Contractor
2.	4(3)	Copy of Principal Contractor’s Health & Safety Plan Available on request	Client
3.	5(6)	Copy of Principal Contractor’s Health & Safety Plan As well as each Contractor’s Health & Safety Plan Available on request	Principal Contractor
4.	5(7)	Health and Safety File opened and kept on site (including all documentation required i.t.o. OHS & Regulations Available on request	Every Contractor
5.	5(8)	Consolidated Health and Safety File handed to Client on completion of Construction work. To include all documentation required i.t.o. OHS & Regulations and records of all drawings, designs, materials used and similar	Principal Contractor

		information on the structure	
6.	5(9)	Comprehensive and Updated List of all Contractors on site, the agreements between the parties and the work being done Included in Health and Safety file and available on request	Principal Contractor
7.	6(7)	Keep record on the Health and Safety File of the input by Construction Safety Officer [CR 6 (7)] at design stage or on the Health and Safety Plan	Contractor
8.	7(2)	Risk Assessment - Available on site for inspection	Contractor
9.	7 (9)	Proof of Health and Safety Induction Training	Every Employee on site
10.	8(3)	Construction Supervisor [CR 6(1)] has latest updated version of Fall Protection Plan [CR 8(1)]	Contractor
11.	9(2)(b)	Inform contractor in writing of dangers and hazards relating to construction work	Designer of Structure
12.	9(3)	All drawings pertaining to the design of structure On site available for inspection	Contractor
13.	9(4)	Record of inspections of the structure [First 2 years – once every 6 months, thereafter yearly] - Available on request	Owner of Structure
14.	9(5)	Maintenance records - safety of structure - Available on request	Owner of Structure
15.	10(d)	Drawings pertaining to the design of formwork/support work structure - Kept on site, available on request	Contractor
16.	11(3)(h)	Record of excavation inspection - On site available on request	Contractor
17.	17(8)(c)	Material Hoist daily inspection entered and signed in record book kept on the premises	Contractor
18.	17(8)(d)	Maintenance records for Material Hoist - Available on site	Contractor
19.	22(d)	Record of temporary electrical installation inspections [once a week] and electrical machinery [daily before use] in a register and kept on site	Contractor
20.	27(l)	Fire Evacuation Plan	Contractor

### 3. INSPECTION CHECKLIST

Employer Particulars	
Employer:	
Registered Name of Enterprise:	
Trade Name of Enterprise:	
Company Registration No.:	
SARS Registration No.:	
UIF Registration No.:	
COIDA Registration No.:	
Relevant SETA for EEA purposes:	
Industry Sector:	
Bargaining Council:	
Contact Person:	
Address of Premises:	
Postal Address:	
Telephone Number:	
Fax Number:	
E-mail Address:	
Chief Executive Officer:	
Chief Executive Officer Address:	
Competent Person:	
Maximum power demand: in KW	
Health and Safety Representatives:	
Activities, products manufactured and/ services rendered:	
Raw materials, materials and chemical/ biological substances:	

Total Number of Employees:	Male: Female:
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Contractor Particulars	
Contractors:	
Site Address:	
Contracts Manager:	
Managing Director:	
Competent Persons:	
CR14: SCAFFOLDING:	
CR15: SUSPENDED SCAFFOLDING:	
CR17(6): MATERIAL HOIST (S):	
CR18(1): BATCH PLANT:	
CR8(1)(a): FALL PROTECTION:	
CR11(1)(1): EXCAVATION WORK:	
CR12: DEMOLITION WORK:	
CR19(2)(b): EXPLOSIVE POWER TOOLS	
CR26(a): STACKING	

INSPECTION		N/A	YES	NO
SECTION/REGS	ITEM CHECKED			
	<b>APPOINTMENTS</b>			
CR6(1)	Supervisor:			
CR6(2)	Assistant Supervisor:			
S17(1)	Health & Safety Representative: (ratio)			
S19(1)	Health & Safety Committees			
CR 12(1)	Demolition Director			
	<b>DOCUMENTS</b>			
GAR 9(1)	Records of Incidents			
GAR 4	Copy of the Act			
GAR 7	Safety Reps Report			
GAR 8	Safety Committee Minutes			
DMR 18(7)	Lifting Machinery Log (Crane)			
CR 3(3)	Notification of Construction Work			
CR 7(2)	Risk Assessment			
CR 7(9)(e)	Proof of the Health & Safety Induction Training			
CR 11(13)(h)	Inspection of Excavation (Records)			
CR 20(g)	Crane Operator Medical Certificate			
CR 21(11)	Mobile Plant Operator Medical Certificate			
CR 18(9)	Batch Plant Repairs & Maintenance Records			
CR22(d)	Temporary Electrical Installation Record			
CR 5(7)	Health & Safety File			
CR 15(11)	Suspended Platforms' Performance Records			

CR 17(b)& (c )	Material Hoists Record Book			
IMPROV NOTICE	Scaffolding Log Book			
CR 21(1)(d)(ii)	Medical Certificate of Fitness			
CR 21(1)(l)	Construction Vehicle & Mobile Plant Register			
CR 22(d)	Electrical Installation & Machinery Register			
	<b>INCIDENTS</b>			
GAR 8(1) S24	Reported			
GAR 9(1)	Recorded Investigated Action Taken			
	<b>PUBLIC SITE</b>			
FR 2(1)	Sanitary Facilities			
CR 28(1) (c)	Changing Facilities for each sex			
CR 25(d)	Perimeter fence & no admittance			
CR 25(e)	Overhead protection netting/falling objects			
NB Notice	Pedestrian warning			
	<b>PERSONAL SAFETY EQUIPMENT</b>			
	Items Issued:			
GSR 2(3)	Items Required:			
S23	(What is the payment on each item?)			
	<b>SAFETY PLANS</b>			
	FIRST AID			
GSR 3(6)	Name(s) of First Aider (s):			
CR 4(1)(3)	Client's Health & Safety Specification			
CR5	Principal's contractor H&S Plan			
	<b>FIRE HAZARD &amp; PRECAUTIONS</b>			
GSR 4	Flammables used, waste, hot work, diesel			
ER 9(1)	Portable Extinguishers			
	<b>ELECTRICAL INSTALLATIONS &amp; MACHINERY</b>			
CR22	Guarding & PPE to Electrical Installations			
	<b>ILLUMINATION</b>			
ER 3(6)	Dangerous Places			
	Housekeeping			
ER6(2)(b),(c),(d)	Clear space storage			
ER6(3)	Disposal of waste			
	<b>EXCAVATIONS</b>			
CR 11(3)(l)	Barricades			
CR 11(3)(c)	Safe Depth Shoring/Bracing			
CR 11(1)(a)	Monitored			
CR 11(3)(h)	Excavation Inspection Record			
	<b>GUARDING</b>			

ER 6(2)(f)	Floor Openings			
	Floor slab sides, Shafts			
	<b>SITE EQUIPMENT</b>			
GSR 13A(a)	Ladders condition, secured			
IMPROV	Scaffold condition, secured			
	Platforms no. of boards condition Support 1.25. Toe Boards			
IMPROV	Hand Rails			
	<b>SITE MACHINES</b>			
DMR 3(2)(3)	Circulars, guards, riving knives			
DMR 2(a)	Mixers guarded			
	<b>ELECTRIC POWER</b>			
EMR 6(1)	Supply Board, condition E.L Relay Test			
GMR 3(1)	Condition of Tools, Leads, Plugs, etc			
	<b>LIFTING MACHINE/TACKLE</b>			
DMR 18(8)	Lifting of persons			
DMR 18(8)	Condition, Securing of Load			
	<b>EXPLOSIVE POWERED TOOLS</b>			
CR 19(1)	Safe Use and Storage			
IMPROV	Warning Notice			
	<b>ROOF WORK</b>			
CR 8(1)	Safety equipment & precautions			
CR 8(2)	Fall protection plan			
CR 8(3)	Updated fall protection plan			
	<b>ASBESTOS CEMENT</b>			
AR 10(a)	Suitable Tools			

**WARNING:** Under no circumstances shall any work of any nature whatsoever on any ASBESTOS material be undertaken unless the work is entrusted and mandated to a “REGISTERED ASBESTOS CONTRACTOR” in terms of the Asbestos Regulations. [CR 12(9)] (plse. contact the Regional Manager’s Office)

**24. HEALTH AND SAFETY FILE COMPILATION AND CONTENT**  
(Document attached)

**25. SAFETY AND SWITCHING PROCEDURES FOR ELECTRICAL INSTALLATIONS** (Document attached)

**NOTE:**

The guidelines and conditions provided in this attached document form an integral constituent of the Health and Safety Specifications. It is therefore a condition of acceptance that no Health and Safety Plan shall be complete unless all relevant elements of this document applicable to the above project have been included in the Health and Safety Plan. The final approval of the Health and Safety Plan in terms of CR 4(2) shall be subject to this requirement based on the following certification by the Principal Contractor or his Agent:

*“ I hereby certify that I have taken cognisance of the content of the document titled ‘**SAFETY AND SWITCHING PROCEDURES FOR ELECTRICAL INSTALLATIONS**’ and have included the relevant elements of the document applicable to the above project in my Health and Safety Plan and shall ensure adherence to the requirements thereof.”*

The contents of CR 5 is pivotal when mandatary appointments are contemplated.

**26. IMPORTANT CONTACT DETAILS (HEALTH & SAFETY ONLY) (Document attached)**

# ATTACHMENTS



# **"HEALTH AND SAFETY FILE"**

**FOR**

**PROJECTS AND MAINTENANCE  
(ELECTRICAL)**

**MANAGED ON BEHALF OF**

**THE NATIONAL DEPARTMENT OF  
PUBLIC WORKS**

This document serves as a guide to Principle Contractors and Contractors (and their agents) to assist them in complying with the requirements of the Act and more specifically the Construction Regulations and to ensure a most comprehensive Health and Safety File. Kindly note the following extractions from the Construction Regulations:

*“Every contractor shall ensure that a health and safety file, which shall include all documentation required in terms of the provisions of the Act and the Regulations, is opened and kept on site and made available to an inspector, client, client’s agent or principle contractor upon request. [CR 5(7)]*

*A Principal Contractor shall hand over a consolidated health and safety file to the client upon completion of the construction work and shall, in addition to the documentation referred to in sub regulation (7) [above], include a record of all drawings, designs, materials used and other similar information concerning the completed structure. [CR 5(8)]*

*A Principal Contractor shall ensure that in addition to the documentation required in the health and safety file as determined in the two sub regulations above, a comprehensive and updated list of all the contractors on site accountable to the Principal Contractor, the agreements between the parties and the type of work being done are included and available. [CR 5(9)]”*



The information, documentation and lists required to be included in the Health and Safety File as contemplated in the Construction Regulations [CR 5(7)], shall be suitably and sufficiently documented in terms of the following items listed below to ensure compliance with the Act as far as is reasonably practicable.

**Note:** In the event that any of the items listed below may not have reference to the planning, implementation and completion of the work to be done pertaining to the project on the construction site, it must clearly be indicated as such with a proper statement e.g. ‘Not Applicable’. All other relevant references or items below shall relate to the information required as contemplated in the Act and Regulations.

**IMPORTANT - This Health and Safety File shall be regarded as the property of the Client as it has to be consolidated and handed over to the Client upon completion of the project. The Principal Contractor shall ensure that this file is adequately protected against any form of damage, abuse or fraud.**

***Registers as follows:***

- \* Accident/Incident Register (Annexure 1 of the General Administrative Regulations)
- \* H&S Representatives (‘SHE - Reps’) Inspection Register
- \* Arc & Gas Welding & Flame Cutting Equipment Inspections
- \* Inspection of Cranes
- \* Inspection of Ladders
- \* Inspection of Vessels under Pressure plus all other excluded under VUP regulations
- \* Fire fighting equipment

The H&S Representatives (SHE-Reps) will be required to submit the abovementioned registers as well as other legally required registers, also from the list below, on a monthly basis to the chairman of the H&S committee for submission to, and endorsement by the H&S Committee. Also refer to the suggested Agenda for the H&S Committee under 12.8.3

***Documents as follows:***

Copy of OH&S Act (updated) (General Administrative Regulation 4.)  
Proof of Registration and good standing with a COID Insurer (Construction Regulation 4(1)(g))  
Appointments – in terms of the Construction Regulations \* [See references Page 4]  
Notification of Construction Work – Annexure 1 [CR 3]  
H&S Specifications [CR 4]  
H&S Plan – Principal Contractor, Contractor & Sub-contractors [CR 5(1) & (4)]  
Proof of Periodic Audits [CR 4, 5 & 6]  
List of all Contractors (accountable to Principal Contractor) on site [CR 5(9)]  
Contractor Agreements [CR 5(9)]  
Type of work done on site [CR 5(9)]

Records of drawings, designs, materials used and similar information concerning the completed structure [CR 5(8)]  
Input by Construction Safety Officer [CR 6(7)]  
Risk Assessment [CR 7(1)]  
Copy of Risk Assessment [CR 7(2)]  
Proof of H&S Induction Training [CR 7(4) & (7) & (9)(b)]  
Proof of training on Hazards and Work Related Procedures [CR (7(4))]  
Fall Protection Plan [CR 8]  
Designer notice to contractor of dangers and hazards relating to construction work [CR 9(2)(b)]  
Drawings design of structure [CR 9(3)]  
Records of Inspections of Structure [CR 9(4)]  
Maintenance records – structure safety [CR 9(5)]  
Record Excavation Inspection [CR 11(3)(h)]  
Method Statement [CR 11(3)(k)]  
Method Statement [CR 12(2)]  
Method Statement [CR 12(11)]  
Operational Compliance Plan [CR 15(2)(c)]  
Certificates, design calculations, sketches and test results [CR 15(3)]  
Examination results [CR 15(9)]  
Suspended Platform Inspection and Performance Test records [CR 15(11)]  
Medical Certificate of Fitness [CR 15(12)(b)]  
Proof of Training [CR 15(12)(c)]  
Material Hoist Inspections [CR17(8)(c)]  
Maintenance Records Material hoist [CR17(8)(d)]  
Record Batch Plant Maintenance & Repair [CR18(9)]  
Register for control of cartridges/nails studs – explosive powered tools [CR19(2)(g)(ii)]  
Medical Certificates of Fitness [CR 20(g)]  
Medical Certificates of Fitness [CR 21(1)(d)(ii)]  
Findings of daily inspections Construction Vehicles & Mobile Plant [CR21(1)(j)]  
Record of Temporary Electrical Installation Inspections [CR22(d)]  
Record of Electrical Machinery Inspections [CR22(d)]  
Proof of Training [CR 27(i)]  
Evacuation Plan [CR 27(l)]  
H&S Rep & Committee Members details  
H&S Committee Meetings' Minutes  
Other appointments in terms of OHASA

Details of Inspections (by DoL)  
Recording and Investigation of Incidents – Annexure 1 [GAR 9(1-3)]  
Action taken on all incidents [GAR 9(4)]  
Certificates of Competency in First Aid [GSR 3(4)]  
Record of Medical Surveillance required in terms of OHASA  
Proof of compliance with Asbestos Regulation requirements  
Proof of compliance with Major Hazard Installation requirements

PRINCIPAL CONTRACTORS - [CR 4(1)(c)]  
CONTRACTORS - [CR 5(3)(b) + (11)]  
COMPETENT PERSONS - [CR 6(1) + (2)]  
- [CR 6(6)]  
- [CR 7(1) + (4)]  
- [CR 8(1)(a)]  
- [CR 10(a) + (e) + (f)]  
- [CR 11(1) + (3)(b)(ii)(b) + (3)(k)]  
- [CR 12(1) + (2) + (3) + (11)]  
- [CR 14(2)]  
- [CR 15(1) + (2)(c) + (8)(c) + (13)]

- [CR 17(8)(a)]
- [CR 18(1) + (7)]
- [CR 19(2)(b) + (2)(g)(i)]
- [CR 20(f)]
- [CR 21(1)(d)(i) + (1)(j)]
- [CR 22(d) + (e)]
- [CR 26(a)]
- [CR 27(h)]

CONSTRUCTION SAFETY OFFICER - [CR 6(6)]

DESIGNER - [CR 9(2)]

☐      ☐      ☐

**IMPORTANT:**

A copy of the following certification in terms of the “**SAFETY AND SWITCHING PROCEDURES FOR ELECTRICAL INSTALLATIONS**” (Document attached) signed by the prospective tenderer / contractor is to be included in the Health and Safety File:

*“ I hereby certify that I have taken cognizance of the content of the document titled ‘SAFETY AND SWITCHING PROCEDURES FOR ELECTRICAL INSTALLATIONS’ and have included the relevant elements of the document applicable to the above project in my Health and Safety Plan and shall ensure adherence and compliance to the requirements thereof.”*

# **NATIONAL DEPARTMENT OF PUBLIC WORKS**

## **SAFETY AND SWITCHING PROCEDURES**

### **FOR**

## **ELECTRICAL INSTALLATIONS**

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### **1 REGULATIONS AND DEFINITION OF COMPETENT PERSON:**

#### **1.1 REGULATIONS:**

All persons who carry out or arrange for work of any description for the Department in connection with electrical apparatus shall make themselves acquainted with the Occupational Health and Safety Act (Act 85 1993) with particular reference to the Electrical Machinery Regulations, Regulations 1 to 23 inclusive.

Access to the above Act and its Regulations can be arranged with the Regional Manager.

## 1.2 DEFINITION OF COMPETENT PERSON:

“competent person” in relation to machinery, means any person who—

- (a) has served an apprenticeship in an engineering trade which included the operation and maintenance of machinery, or has had at least five years’ practical experience in the operation and maintenance of machinery, and who during or subsequent to such apprenticeship or period of practical experience, as the case may be, has had not less than one year’s experience in the operation and maintenance appropriate to the class of machinery he is required to supervise;
- (b) has obtained an engineering diploma in either the mechanical or electro technical (heavy current) fields with an academic qualification of at least T3 or N5, or of an equivalent level, and who subsequent to achieving such qualification has had not less than two years’ practical experience in the operation and maintenance appropriate to the class of machinery he is required to supervise;
- (c) is a graduate engineer and has had not less than two years’ post-graduate practical experience in the operation and maintenance appropriate to the class of machinery he is required to supervise and who has passed the examination on the Act and the regulations made there-under, held by the Commission of Examiners in terms of regulations E5 (2) of the regulations published under Government Notice R.929 of 28 June 1963; or
- (d) is a certificated engineer;

## **2 SAFETY EQUIPMENT**

The following equipment required for working on electrical installations and distribution systems, must be maintained in good order and repair and must be made available:-

Safety belt, overalls, hard hat, safety shoes or boots, rubber gloves, "Men Working" notice boards, locks for locking off switches, buss bar shutters in truck-type switchgear, isolators or earthing links, rubber sheet and length of rope with short circuiting earthing-chains, earthing sticks and testing/phasing sticks rated for the voltage of the equipment to be tested.

Under no circumstances shall work be carried out on electrical apparatus unless the proper safety equipment is used

With regard to overhead line men, no work shall be carried out unless use is made of a non-metallic ladder and the appropriate safety belt, rubber gloves, overalls, hardhat and safety shoes or boots are worn. The buddy system must also be implemented.

## **3 DEFINITION OF OPERATING TERMS**

### 3.1 Alive or live

This means electrically connected to the power system and/or electrically charged.

Consider an isolated overhead line that is not earthed. An overhead line can be electrically connected to the system in the following ways:

- (a) By means of a metallic conductor such as links and breakers or switches. This is the normal way of transmitting electrical energy.
- (b) Electromagnetic induction or transformer action from a nearby current carrying line will induce a dangerous voltage in the isolated lines and are a hazard to all personnel that must work on or with the line.
- (c) Electrostatic induction or condenser action from a nearby live line will induce a dangerous voltage in any isolated, but not earthed, overhead line. Electrically charged means at a potential difference or voltage above zero

### 3.2 Dead

This means that any apparatus so described is isolated from the power system. Rotating plant shall not be regarded as dead until it is stationary or is being slowly rotated by means of barring gear and is not excited.

The Occupational Health and Safety Act defines dead as: “dead” means at or about zero potential and isolated from any live system. Disconnected has the same meaning as isolated. An overhead line disconnected from all sources of supply but not earthed, cannot be regarded as dead because:

- (a) It can retain a static charge.
- (b) It can acquire a static charge due to atmospheric conditions.
- (c) It can accidentally be made alive.
- (d) Nearby lines continually induce voltage in them.

The regulations recognise only the following devices as disconnects or isolators:-

- (a) Links.
- (b) Fuses.
- (c) Truck type switchgear.

### 3.3 Earthing

This means the connecting of apparatus electrically to the general mass of earth in such a manner as will ensure at all times an immediate safe discharge of electrical energy. This is done through an earth bar or spike by means of a good metallic conductor.

To fully appreciate this definition we must refer to the Electrical Machinery Regulations, Regulation 3 of the Occupational Health and Safety Act which states:

"Work on Disconnected Electrical Machinery. —Without derogating from any specific duty imposed on employers or users of machinery by the Act, the employer or user shall, whenever work is to be carried out on any electrical machinery which has been disconnected from all sources of electrical energy but which is liable to acquire or to retain an electrical charge, as far as is practicable, cause precautions to be taken by earthing or other means to discharge the electrical energy to earth from such electrical machinery or any adjacent electrical machinery if there is danger if there is danger there from before it is handled and to prevent any electrical machinery from being charged or made live while persons are working thereon."

Electrical apparatus and in particular overhead lines may become charged due to:-

- (a) Direct lightning strokes.
- (b) Electro magnetically induced currents due to a lightning stroke in the immediate vicinity of the line.
- (c) Electro statically induced charges on the lines due to the presence of thunderclouds.
- (d) Electrostatic charges imparted to the line by the friction of dust or snow blowing past the conductors.
- e) Electrostatic charges imparted to the line due to changes in line altitude"

These changes are responsible for tremendously high voltages between overhead lines and earth, in fact, sometimes high enough to cause a flash over on insulators. A spark may span several centimetres of air to a person's hand should he approach too closely to an isolated unearthed overhead line.

An overhead line or apparatus can be made alive by:

- (a) Unauthorised operating, i.e., closing the wrong links and breaker.
- (b) Faulty wiring on consumer's stand-by sets. (Back feed from consumer)
- (c) A broken overhead conductor from a different line falling onto the isolated line.
- (d) Synchronising plugs.

From the foregoing paragraphs it is clear that the purpose of earthing isolated lines and apparatus are:



- (a) To discharge them should there be a residual voltage or charge.
- (b) To prevent them acquiring a static charge.
- (c) To prevent danger to persons working on apparatus in the event of someone accidentally making it alive.
- (d) To dissipate induced voltages continuously and safely.

Earthing gear means the fixed or portable appliances used for earthing electrical apparatus. The dangers from inadequate or improper earth connections are:

- (a) Electrocution.
- (b) Burns from arcing.
- (c) Electric shock leading to falls.

Earthing may be done by the closing of earthing links, or by the attaching of fixed earthing devices or by the affixing of portable earthing straps. In each case the main idea is to ensure the safety of personnel.

In affixing portable earth straps, the connection to the earthbar or earthed metal or spike must be made first and in removing such earthing straps, the disconnecting from the earthbar or earthed metal or spike must be done last. Also, a link stick or an insulated stick should be used to connect the earth wires to the overhead lines or apparatus.

These requirements are most important because connecting the portable strap first to earth and then to the conductors by means of a link stick avoids the risk of a shock to the operator from static charges or induced voltages.

**REMEMBER:** *Always safety test before applying earths.*

### 3.4 Isolate

This means to disconnect from all Sources of electrical potential by means of opening of links or fuses or the withdrawal of truck-type circuit-breakers.

All sources of electrical potential mean all points or circuits from where the apparatus can be made alive. Links, fuses and truck-type switchgear can be regarded as isolators because:

- (a) They leave a visible air gap in a circuit when open, removed or withdrawn.
- (b) They contain no stored energy and will not close due to defects.
- (c) They can be locked in a physical condition and thus can only be operated by the person with the correct key.

Opening links and locking them in the open position; removing fuses and locking them away; withdrawing truck-type switchgear and locking the buss bar shutters are the only safe methods of isolating.

### 3.5 Circuit Breaker

This is a device designed to make or break electric current under normal and fault conditions. A breaker can make or break an electric current because it is designed to extinguish the arc very rapidly and effectively. It is also designed to withstand the tremendous forces under short circuit conditions. The arc-extinguishing medium for high-voltage breakers is normally air, oil or vacuum and should this medium be lost, the breaker becomes a link. Never use a breaker without an arc-extinguishing medium to interrupt current flow because the breaker will probably explode or it will sustain severe damage.

A fault condition is any condition that will cause an excessive amount of current flow. The normal fault conditions are:

- (a) Phase faults.
- (b) Earth faults.
- (c) Open circuit in one line of a three-phase system (Single-phasing).
- (d) Too low a voltage. (Motors will draw a large current or even stall).

- (e) Too high a voltage.
- (f) Overloading.

For the following reasons breakers cannot be regarded as isolators:

- (a) They leave no visible gap in a circuit.
- (b) They contain stored energy and can close on their own due to various defects.
- (c) It is normally not possible to lock them in an open position.
- (d) Oil circuit-breakers are subjected to carbon tracking which could cause a flash-over between contacts.

### 3.6 Link

This is a device for making or breaking a circuit when no load current is flowing. Links differ from breakers and switches in the following respects:

- (a) They are not equipped with an arc extinguishing medium/device.
- (b) Their movement is very slow.

Should current be interrupted by means of links, an uncontrollable arc will be struck at the points where the contacts part.

The temperature of the arc is so high (+ 2 000°C) that it will simply melt the parting contacts. As the contacts move further apart, the arc will lengthen and burn everything away. Molten metal could splash onto the operator and cause severe injuries.

As the arc lengthens, considerable noise is generated and the light intensity is so severe that the operator could suffer from “welding flash” of the eyes.

When apparatus equipped with earthing links is required to be earthed at more than one place, the earthing links shall always be closed first and thereafter, any necessary portable earthing gear may be affixed to the apparatus.

In removing the earths in readiness for making the apparatus alive, all portable earthing gear shall first be removed and earthing links shall be opened last.

Closing the earthing links first ensures maximum safety to the operator. These links are easily operated, make good contact and the operating handles are at a safe distance from the contact points.

Locks and keys shall also be provided for links. The operating mechanism of all manually operated links shall be fitted with fastenings for locks. The operating mechanisms of each set of manually operated links shall normally be locked whether the links are in the open or in the closed position.

The locking of links provides a safeguard against their being opened or closed in error by other persons apart from the one with the correct key and a written instruction to operate.

### 3.7 Operating methods

This means switching, linking, safety testing and earthing. This definition also indicates the order of operating when making apparatus safe to work on.

- (a) Switching -
  - (i) Open breaker or switch to interrupt current flow safely, i.e. prevent arcs.
  - (ii) Close breaker or switch to start current flow - the only safe way.
- (b) Linking - open at least one set of links from where the apparatus can be made alive and lock the links in the open position. Always ensure that you are not going to start or interrupt current flow with the links by ensuring that the breaker or switch is open.
- (c) Safety test - test all three phases to ensure that the apparatus is disconnected from all sources of supply and that there is no back-feed from a consumer's standby set or other source.

(d) Apply earths - ensure safety of the workers by:-

- (i) Discharging the line or apparatus.
- (ii) Preventing the line from acquiring a static charge.
- (iii) Preventing the line or apparatus from being accidentally made alive.

Before applying portable earths, ensure that they are mechanically and electrically in good condition. There should be no broken strands, the clamps should be rigid and without defect and when applied properly, should make intimate contact with the conductors and earthbar or spike. The earthing cable tails should be as short as possible. The current carrying capacity of the portable earth is greatly reduced by broken strands. It will act as a fuse and increase the danger to workmen.

#### **4 GENERAL SAFETY PRECAUTIONS**

**No person shall carry out work of any description (including maintenance, repairs, cleaning and testing) on any part of electrical apparatus unless such parts of the apparatus are:**

- (a) dead;
- (b) disconnected, isolated and all practicable steps taken to lock off from live conductors;
- (c) efficiently connected to earth with the appropriate earthing sticks or gear designed for this purpose at all points of disconnection of supply;
- (d) screened where necessary to prevent danger, and caution and danger notices fixed;

and unless such person is fully conversant with the nature and extent of the work to be done.

It is the duty of the competent person in charge of the work to ensure that the foregoing provisions are complied with. He shall also ensure that when the work has been completed, the apparatus is safe to be made alive and that all earths and temporary danger notices have been removed.

Provided that cleaning and painting of earthed metal enclosures, connections or disconnections of circuits to or from live systems may be carried out in accordance with instructions issued by the competent person concerned.

Provided also that where the design of the apparatus precludes the strict compliance with all details of these precautions, the work shall be carried out to the instructions of the senior competent person present.

When any person receives instructions: regarding work on or the operation of high voltage apparatus he shall report any objection to the carrying out of such instructions to the competent person who shall have the matter investigated and, if necessary, referred to higher authority.

#### **5 ACCESS TO HIGH VOLTAGE ENCLOSURES AND APPARATUS**

Enclosures, chambers, cubicles or cells containing high voltage conductors shall be kept locked and shall not be opened except by a competent person.

#### **6 SWITCHING:**

- (a) No switching shall be carried out without the sanction of the appropriate competent person except for agreed routine switching or in cases of emergency.

All telephone instructions/messages relating to the switching operation shall be written down and be repeated in full to the sender to ensure that the message has been accurately received.

- (b) When a switch shows any sign of distress after operating, its condition shall be immediately reported to the appropriate competent person, and it shall be examined before further operation.
- (c) The examination of and necessary adjustments including inspection and/or changing of oil of any high voltage oil immersed circuit-breaker which has operated under fault conditions shall be carried out if possible before the circuit-breaker is re-closed, or at the earliest available opportunity thereafter.

## **7 WORK IN SUBSTATIONS AND SWITCHING STATIONS CONTAINING EXPOSED LIVE CONDUCTORS.**

### **7.1 Safety Clearances to Live Conductors:**

Unless the whole equipment is “dead”, the section which is made dead for work to be carried out shall be defined by the use of barriers or roping such that the minimum clearance from the nearest exposed conductor to ground level or platform or access way shall be:-

Rated Voltage	Clearance
Up to 11 kV	3.0 m.
From 11kV to 33kV	3.4 m

The area at ground level shall be only that in which the work is to be carried out.

### **7.2 Insufficient Clearances**

If the above clearances are not sufficient to avoid danger, other suitable arrangements shall be made to provide the requisite degree of safety.

### **7.3 Ladders and Other Long Objects**

Ladders and other long objects shall not be used without the permission of the senior authorised person in charge of the work and the movement and erection of such ladders shall be under his/her direct supervision at all times.

## **8 WORK ON METAL CLAD SWITCHGEAR SPOUTS:**

- (i) The section of bus bars on which work is to be carried out shall be made dead and isolated from all points of supply.
- (ii) The shutters of live spouts shall be locked closed.
- (iii) The busbars shall be earthed with approved earthing equipment if possible, at a panel other than that at which work is to be carried out. Temporary earths shall in any case be applied to all phases on the busbar at the point of work. These earths may then be removed one phase at a time for work to be carried out. Each phase earth shall be replaced before a second phase earth is removed.

For the earthing of metal clad switchgear, approved appliances only shall be used. The insertion of the hand or any other tool in contact spouts for this purpose is forbidden.

## **9 WORK ON TRANSFORMERS:**

When work is carried out on transformers, both the primary and secondary switches and isolators shall be opened. The transformer shall also be isolated from all common neutral earthing equipment from which it may become live. This does not require the disconnection of solidly earthed neutrals.

## **10 WORK ON CABLES, CONDUCTORS AND OVERHEAD LINES:**

### **10.1 Cables and Conductors**

- (a) No person shall touch the insulation, which covers or supports any high voltage conductor unless the conductor is dead and earthed.
- (b) Before carrying out work involving cutting into a high voltage cable, the responsible person shall satisfy himself that the cable has been made dead, isolated and earthed where practicable and identified. In all cases of doubt, the cable shall be spiked in an approved manner.

## TESTING PROCEDURES AND PRECAUTIONS FOR COMMISSIONING OF ELECTRICAL CABLES

The aim of this section is to create an awareness of the latest standards and testing procedures for the commissioning of new and the re-commissioning of repaired electrical cables.

Before commissioning or re-commissioning cables tests must be carried out to ensure the integrity of the cable/s and to ensure the safety of operating personnel.

### 1. Low voltage Cables

#### 1.1 Initial Tests

Carry out a meter test to ensure that the insulation resistance complies with the manufacture's and the relevant SABS requirements. For L.V. cables a 500V d.c. meter is adequate for this purpose.

#### 1.2 Voltage Tests

This covers extruded solid dielectric cables (covered by SABS 1507), voltage ranges are as indicated in Table 1

After installation the cable has to be tested to ensure the integrity of the cable and the quality of the work. A.C. testing of solid dielectric cables is preferred. Very low frequency high voltage sinusoidal electrical testing methods are recommended to avoid the use of cumbersome large testing equipment.

Method: The test voltage should be applied between conductors and between each conductor and the metallic protection or earthed surroundings of the cable as appropriate. The voltage to be raised gradually to the specified values in the table and maintained for 15 minutes.

Table1 -Test Voltages After Installation

1	2	3	4
Cable operating voltage	The test voltage is to be applied	Test Voltage V	
		m.s)	d.c.
300/500	Between Conductors and conductors/earth		
600/1000	Between Conductors and conductors/earth		
1900/3300	Between conductors		
1900/3300	Between Conductors and conductors/earth		

### 2. Medium/High Voltage

Each section of the cable installation between substations shall be subjected to a preliminary voltage or insulation resistance test to prove the insulation resistance.

The installation resistance can be measured with a high voltage meter with a rating of 5000V.

#### 2.1 Paper Insulated Lead covered Double Steel Tape or Wire Armoured Cable (covered by SABS 97), voltage ranges are as indicated in Table 2

The test voltage should be applied between conductors and between each conductor and the metal sheath, which should be held at earth potential. In each case, the voltage should be increased steadily to the stipulated value and maintained at this value for 15 minutes.

Table 2 in-situ test voltages.

1	2	3	4	5	6	7
Voltage Rating of Cable kV	Test Voltage					
	Belted Cables				Single-core and screened cables	
	Between conductors		From conductor to sheath		Between conductor and sheath or screen	
	a.c.	d.c.	a.c.	d.c.	a.c.	d.c.
3.3/3.3	7	9	7	9	-	-
3.8/6.6	13	19	8	11	8	11
6.6/6.6	13	19	13	19	-	-
6.35/11	22	31	13	19	13	19
11/11	22	31	22	31	-	-
12.7/22	-	-	-	-	25	36
19/33	-	-	-	-	38	54

## 2.2 XLPE-Insulated Cables covered by SABS 0198 Part 13.

NOTE: If circumstances necessitate testing that is not in accordance with the recommendations of this section, the cable manufacturer or a test expert should be consulted before any testing is carried out.

The use of inappropriate or excessive test voltages or of unsuitable fault location methods can damage XLPE-insulated cables. Cables that are particularly prone to damage during testing are those that have water trees and those that have a construction that differs from that specified in the 1981 and in subsequent editions of SABS 1339.

The Types of Test Waveforms to be applied are:

- Very low frequency (VLF): An Alternating waveform that is either sinusoidal or pseudo-square/cosine rectangular, of nominal frequency 0,1 Hz.
- Power frequency: An alternating sinusoidal waveform of frequency in the range 25 Hz to 100 Hz.
- Surge: A step waveform that has a rise time of a few microseconds and that gradually decays to zero within 5 s.

These waveforms are referred to in the various test tables below.

Note: Where the capacity of the test set permits, all three cores of a three-core cable may be tested together.

### 2.2.1 PRELIMINARY TESTS

2.2.1.1 Leakage Resistance. Before carrying out any testing or fault location, determine and accurately record the leakage resistance to earth and, if relevant, between conductors. Use an instrument that generates a d.c test voltage of not less than 250 V and not more than 5 kV. Typical minimum values of leakage resistance are given in Table 3.

TABLE 3—MINIMUM LEAKAGE RESISTANCE

1	2	3	4	5
Cable Operating voltage $U$ , kV	Minimum leakage resistance, M $\Omega$			
	Cable length, m			
	100	300	1 000	3 000
6,6	150	50	15	5
11	240	80	24	8
22	460	153	46	15
33	680	227	68	23

NOTE:

- 1 The value of leakage resistance multiplied by the cable length should not be less than  $(2 U + 2) \text{ M}\Omega\cdot\text{km}$ , where  $U$  is the voltage rating of the cable in kilovolt.
- 2 This test is repeated after the required sequence of tests (see 2.2.2.7).

## 2.2.2 TESTING

- 2.2.2.1 Over voltage Commissioning Tests. When newly installed cables are being commissioned, they should be tested at the test voltages given in Table 4, appropriate to the test waveforms and test durations given in columns 1 and 2 of the table.

TABLE 4—COMMISSIONING TEST VOLTAGES (r.m.s.)

1	2	3	4	5	6
Test waveform (see 2.2)	Duration, Min	Commissioning test voltage, kV			
		Cable Operating voltage, kV			
		6.6	11	22	33
VLF (0,1 Hz)	60	11	19	38	57
Power frequency	60	8	13	25	38

NOTE:

1. Test sets for the above are commercially available.
2. Where the above test levels cannot be achieved, a reduced voltage for an extended time may be negotiated.

- 2.2.2.2 Overvoltage Maintenance/Repair Tests. When cables are tested for maintenance or repair purposes, they should be tested at the test voltages given in Table 5, appropriate to the waveforms and test durations given in columns 1 and 2 of the table.

- 2.2.2.3 Surge Test Method (see Table 5). The surge test is intended to be a practical basic safety test. It can be used as a non-damaging means of identifying fairly serious existing or potential faults when power frequency or VLF equipment is not available. The test avoids the application of a continuous d.c. voltage (see 2.2.2.4), but it is not as conclusive or rigorous as the other methods.

**CAUTION:** During the surge test, a peak voltage of up to twice the test voltage can be generated in the cable.

**Method.** Charge the surge generator to the appropriate test voltage given in Table 5. Using single-shot mode, release a surge into the cable and then soft-discharge the cable (see 2.2.5.5) within 5 s. Repeat the procedure up to five times and then fully discharge the cable by solidly earthing it for at least 5 min.

TABLE 5—MAINTENANCE/REPAIRS TEST VOLTAGES (r.m.s.)

1	2	3	4	5	6
Test waveform (see 2.2)	Duration	Maintenance/repair test voltage, kV			
		Cable operating voltage, kV			
		6.6	11	22	33
VLF (0,1 Hz)	15 min	8	13	25	38
Power frequency	15 min	7	11	22	33
Surge test (see 2.2.1.3)	5 surges, max.	7	11	22	33

- 2.2.2.4 D.c. Over voltage Testing. D.c. over voltage testing is likely to cause irreversible damage to XLPE-insulated cable systems, particularly if the cables have water trees. It often fails to identify potentially hazardous conditions in the cable. If d.c. testing has to be carried out because no other test methods are available, the voltage and duration should be limited to the appropriate values given in Table 6, which are recommended for quick identification of gross faults only. Use a d.c. test set or a surge generator in d.c. mode to apply the test voltage. After applying the voltage, soft-discharge the cable (see 2.2.2.5), using either the d.c. test set or a discharge stick. Fully discharge the cable by solidly earthing it for at least 8 h but preferably for 24 h.

TABLE 6—D.C. TEST VOLTAGES				
1	2	3	4	5
Duration, s	D.c. test voltage, kV			
	Cable operating voltage, kV			
	6.6	11	22	33
10	6	10	20	30

- 2.2.2.5 **SOFT DISCHARGE OF CABLE.** An XLPE-insulated cable should always be soft-discharged through a resistance of at least 200 k $\Omega$ , for example by using a discharge stick. Discharging a conductor direct to earth by short-circuiting it with a lead can severely damage the cable. After the initial discharge, a cable should be solidly earthed for at least 5 min. If the cable has been subjected to any form of d.c. test, it should be solidly earthed for at least 8 h, but preferably for 24 h.

- 2.2.2.6 **CABLE SHEATH TESTING.** To avoid problems caused by the ingress of water into the cable, a cable should be subjected to sheath testing:

- a) at commissioning,
- b) annually, and
- c) after the location and repair of a fault.

Cable sheath testing can also be used to locate conductor earth faults that have punctured the outer sheath, provided that multiple sheath faults are not present. A direct current sheath test voltage of 5 kV should be applied for 1 min, with a leakage current of 1 mA/km being regarded as acceptable.

- 2.2.2.7 **AFTER TESTING.** After completion of any of the above tests, the leakage test described in 2.2.1.1 should be repeated. A tenfold reduction in the value of leakage resistance could indicate a potential problem.

## 2.2.3 CIRCUIT-BREAKER CLOSURE

- 2.2.3.1 Faulty or Unknown Cable Conditions. Closing a circuit-breaker on an untested cable can be hazardous to the operator and can damage the cable. A fault should never be re-established by repeated closing of a circuit-breaker.

- 2.2.3.2 Voltage Doubling. During switch-in onto open circuit, voltage doubling occurs at the remote end of the cable. Voltages of up to 20 kV can occur on an 11 kV system. Switching onto a load such as a transformer avoids this voltage doubling.



# IMPORTANT CONTACT DETAILS

## (FOR HEALTH & SAFETY ASPECTS ONLY)

The contractor is to add all the important contact information about essentials services, support and assistance.



SERVICE	NUMBER	CONTACT PERSON
Hospital		



Ambulance		



Water		
Electricity		



Police		



Fire Brigade		



Engineer		

**ADD OTHER IMPORTANT HEALTH & SAFETY CONTACT DETAILS AS MAY BE FOUND NECESSARY.**

## COVID-19 GUIDELINES FOR RESUMPTION OF CONSTRUCTION



public works

Department:  
Public Works  
REPUBLIC OF SOUTH AFRICA

# COVID-19 GUIDELINES FOR MANAGEMENT OF RISK ON CONSTRUCTION SITES

## SITE DEGREE OF RISK

BUILDING AND PROJECT TYPE	SITE SET-UP AND STAFF WELFARE	CONSTRUCTION STAGE
Lower Risk	For most, but not all project construction stage risk may be as follows:	For most but not all sites, set-up risk may be as follows:
Industrial, Logistical, Roads and Bridge Construction	Lower Risk	Lower Risk
Medium Risk	<ul style="list-style-type: none"> <li>Excavation and groundworks</li> <li>Foundations and Piling</li> </ul>	<ul style="list-style-type: none"> <li>Large Sites</li> </ul>
Residential Accommodation	Medium Risk	Medium Risk
High Risk	<ul style="list-style-type: none"> <li>Basement and Substructure</li> <li>Structural Frame</li> <li>Roofing</li> <li>Interior First Fix</li> <li>Interior Second Fix</li> </ul>	<ul style="list-style-type: none"> <li>Site and management offices</li> </ul>
Healthcare facilities, Correctional Centers, Military Bases, Police Stations, Magistrates Offices	High Risk	High Risk
		<ul style="list-style-type: none"> <li>Scaffolding</li> <li>Travel to and from site and access to site</li> <li>Horizontal walkways and vertical access</li> <li>Staff changing and locker rooms</li> <li>Showers and toilets</li> <li>Confined Spaces</li> <li>Confined Sites</li> </ul>
	<b>GUIDLINE</b> For each construction contract there will be different levels of risk and it will be critical to evaluate the specific risks of each individual project.	<b>GUIDLINE</b> For each construction site there will be different levels of risk and it will be critical to evaluate the specific risk of each individual project.

## RISK MITIGATION PLAN

RISK DESCRIPTION	MITIGATION PLAN/ACTION	RESPONSIBILITY
<b>Demographics of Labour:</b> <ul style="list-style-type: none"> <li>Inadequate procedures in place to identify potential infected employees and workers</li> <li>Manage the exposure to COVID-19 on the project, including visitors and suppliers</li> </ul>	<p>Contractor is to maintain a register of all employees and workers on the project, including Sub-Contractors (inclusive of employees and workers) and Professional Team, keeping records of the following information as a minimum (Note: the NIOH document that is currently available):</p> <ul style="list-style-type: none"> <li>Name</li> <li>Age of employee/visitor</li> <li>Contact Details</li> <li>Health status</li> <li>Socio-economic status/unskilled labour (work force)</li> <li>Accommodation arrangements (work force)</li> </ul>	CONTRACTOR
<b>Origin of labour and transportation</b> Need to minimize the risk of exposure to virus whilst in transport	<ul style="list-style-type: none"> <li><b>On site transportation:</b> Where on site transportation is done, a policy needs to be available for how such transportation will be made safe and limit any opportunity for cross infection. If possible the Principal Contractor should provide their own transportation of work force. (Where not possible, use of public transport can be considered to comply to transport limitations)</li> <li><b>Parking areas:</b> Private and public vehicles are required to park outside of the construction site</li> <li>Support staff for professional service providers are to work from office location or from home</li> <li><b>Education and information:</b> Information boards are required at entrance of sites and within Site Offices with information on the virus and precautions to be taken during working hours and traveling.</li> <li><b>Social Distancing:</b> <ul style="list-style-type: none"> <li><b>On site:</b> As far as possible, work activities must be so arranged that social distance is kept to a minimum of 2 metre.</li> <li><b>Site office:</b> seating arrangements must be of such that social distancing for roll players is kept to a minimum of 1 metre, ie; '<b>ONE CHAIR, SKIP CHAIR, ONE CHAIR, SKIP CHAIR</b>'.</li> <li>Roll players must be limited to Professional Team and principal contractor.</li> <li>Facial Masks must be worn at all times by all roll players.</li> <li>Contractor work force when on site and transportation to and from site, where hand gloves can be used, they should be worn at all times to minimize touching of possible contaminated surfaces and injury.</li> </ul> </li> </ul>	CONTRACTOR AND PROFESSIONAL TEAM

RISK DESCRIPTION	MITIGATION PLAN/ACTION	RESPONSIBILITY
<p><b>Public transportation across borders/towns/cities</b></p> <p>Where a return to work will necessitate travel between Provinces and cities for employees and workers to return to the project, The Principal Contractor and Sub-Contractors are to have in place procedures for or provision of transport for the return of workers to minimize the risk of exposure to the virus whilst in transit.</p>	<p><b>The contractor to source/recommend a transport service provider that complies with all travel restrictions and requirements as gazetted by the government, inter alia:</b></p> <ul style="list-style-type: none"> <li>• Maximum occupancy of vehicles to allow for social distancing</li> <li>• Vehicles sanitized before passengers board</li> <li>• Passengers provided with Face Masks and hand sanitizers provided within vehicles for passengers sanitization before boarding and after returning from vehicles for comfort breaks</li> <li>• Regular testing of body temperature</li> <li>• Adequate number of vehicles to be provided to comply with the maximum occupancy</li> <li>• Principal Contractor to put in place procedures for sanitization of personal belongings and luggage of work force on arrival at final destination</li> <li>• Permits to be provided per vehicle and per passenger from Authorising Authority</li> </ul>	<p><b>CONTRACTOR</b></p>
<p><b>Social Distancing:</b></p> <p>Construction site and facilities not set up in such a way that it will be possible as far as is practicable to maintain the required social distancing of 2 metres between persons when at work</p> <p><b>Risk:</b></p> <p>Manual labour for physical tasks and tasks that will not allow for social distancing;</p>	<p><b><u>Tasks that require more than 1 person to complete:</u></b></p> <ul style="list-style-type: none"> <li>• Providing adequate supplies of suitable PPE such as face masks, task specific gloves, safety glasses, disposable/additional coveralls;</li> <li>• PPE used during multi-person activities to be exchanged immediately after the task is completed;</li> <li>• Sealed bins to be provided for disposable PPE such as masks, disposable coveralls, disposable gloves, etc;</li> <li>• Sealable bags provided to each person for keeping PPE requiring laundering, such as gloves and coveralls, and</li> <li>• Sanitizing/washing facilities provided for immediate sanitizing of hard hats, safety glasses, shoes, safety harnesses etc, on completion of multi-person tasks</li> </ul>	<p><b>CONTRACTOR</b></p>

RISK DESCRIPTION	MITIGATION PLAN/ACTION	RESPONSIBILITY
<p><b>Site access by non-employees/security access</b></p> <p>Inadequate access control measures in places</p>	<ul style="list-style-type: none"> <li>• Stop all non-essential visitors</li> <li>• All employees and non-employees to be screened with non-contact thermometers (Thermal Thermometers);</li> <li>• Body temperature checks with thermometer upon employee's arrival and departure;</li> <li>• Introduce staggered start and finish times to reduce congestion and contact at all times;</li> <li>• Take body temperatures of anybody stepping on or off site;</li> <li>• Monitor site access points to enable social distancing;</li> <li>• Number of access points to be reduced to enable controlled monitoring;</li> <li>• Ensure disinfectants are in place for disinfecting of shoes on entering/leaving the site;</li> <li>• Provide hand sanitizer for all entering the site to sanitize hands;</li> <li>• Allow social distancing of 2 metres in queues for all entering the site;</li> <li>• Regular cleaning of common contact surfaces areas, eg; desks, telephones handsets, site office door handles, chairs, etc;</li> <li>• Drivers of suppliers of materials and goods and services must remain with their vehicles if load will allow it, if not, drivers are to wash hands before unloading goods and materials</li> </ul>	<p><b>CONTRACTOR</b></p>
<p><b>Alcohol and Drug Testing</b></p> <p>Lack of safe testing procedures in place for alcohol and drug testing</p>	<ul style="list-style-type: none"> <li>• Alcohol testing may only be done using single use test units, and must be disposed of in the appropriate contaminated waste bins provided on site;</li> <li>• Drug testing will only be done by an occupational health facility either using urine or blood sampling;</li> <li>• A protocol will be drawn up by the Principal Contractor to manage this with the occupational health service being used.</li> </ul>	<p><b>CONTRACTOR</b></p>

RISK DESCRIPTION	MITIGATION PLAN/ACTION	RESPONSIBILITY
<p><b>Medical Surveillance</b></p> <p>No methodology in place as part of the normal requirements for pre-placement, periodic and exit medicals that includes factors related to COVID-19</p>	<ul style="list-style-type: none"> <li>• The normal requirements of pre-placement, periodic and exit medicals will remain, with the Occupational health service providing a methodology of how they will be including factors relating to Covid-19. No lung functions or peak flows will be done until deemed safe to do so by the South African Thoracic Society.</li> <li>• It is preferable that occupational health service providers use a cloud-based record keeping service to ensure easy tracking and tracing. Free apps such as Square 1 is such an example.</li> <li>• Any person who contracts the virus may need to be reported to the Compensation Commissioner as an occupational disease where their work is to monitor and in contact with others. Such details are provided in the Compensation for Injuries and Diseases Act (COIDA).</li> <li>• Isolation of workers who have a temperature or any symptoms, and removal to the closest facility for testing and treatment, through the numbers provided. The PC is to ensure their policy on this includes such information.</li> <li>• Workers will be required to complete COVID-19 questionnaires prior to returning to site. Any worker with any symptoms is not to return to work, or notify the PC of same.</li> </ul>	<p><b>CONTRACTOR</b></p>
<p><b>Ablution Facilities on Site</b></p> <p>Unhygienic ablution facilities leading to poor hygiene</p>	<ul style="list-style-type: none"> <li>• Restrict the number of people using toilet facilities at any one time. e.g. use a welfare attendant;</li> <li>• Hand washing facilities (soap and water, paper towel) to be available where possible, and if not, to provide hand sanitizer. Wash hands before and after using the facilities</li> <li>• Induction training to educate to ensure all users are hand washing correctly;</li> <li>• Enhance the cleaning regimes for toilet facilities particularly door handles, locks and the toilet flush handle. Flush toilets preferably 1:15 ratio unless increased cleaning regime present;</li> <li>• Portable toilets should be avoided wherever possible, but where in use these should be cleaned and emptied more frequently. Portable toilets to be provided at a 1:10 ratio;</li> <li>• Provide suitable and enough rubbish bins for hand towels with regular removal and disposal be cleaned and emptied more frequently;</li> <li>• Introduce staggered start and finish times to reduce congestion and contact at all times;</li> <li>• Consider increasing the number or size of facilities available on site if possible.</li> </ul>	<p><b>CONTRACTOR AND EMPLOYEES</b></p>

RISK DESCRIPTION	MITIGATION PLAN/ACTION	RESPONSIBILITY
<p><b>Waste Management for Covid-19 Waste</b></p> <p>Outdated waste management arrangements in place that leads to an increased risk of the spread of Covid-19</p>	<p>Waste management arrangements to be updated to include provision for the disposal of additional waste generated due to preventative measures implemented. All waste to be managed as hazardous waste.</p> <p>a. Disposal of any gloves, masks</p> <p>The contractor shall dispose of all used gloves and masks as hazardous waste and provide sealable bags and containers for the safe disposal of this waste.</p> <p>b. Paper towels</p> <p>The contractor shall provide adequate supplies of paper towels on site. At points where these towels are provided lined waste bins to be placed in order to collect all used towels and then to be disposed of in hazardous waste.</p> <p>c. Disinfectant solution</p> <p>The contractor to provide adequate supplies of disinfectant on site where the use of water and soap for cleaning is not practical. If disinfectant dispensers are not refilled it should be disposed with other hazardous waste.</p> <p>d. Wastewater</p> <p>Wastewater at washing points, toilets, and bathrooms to be contained in a drainage system that prevent surface spills. If wastewater is contained in waste buckets it must be sealed when removed and disinfected after it is cleaned.</p>	<p><b>CONTRACTOR</b></p>
<p><b>Site Meetings</b></p> <p>Not limiting the number of employees at all activities to the minimum required to do the work in a safe manner.</p>	<p>Only necessary meeting participants should attend.</p> <ul style="list-style-type: none"> <li>Attendees should be two metres apart from each other.</li> <li>Rooms should be well ventilated / windows opened to allow fresh air circulation.</li> <li>Consider holding meetings in open areas where possible.</li> <li>Technological alternatives to be exploited for meeting</li> <li>Attendance if possible (Zoom, Skype, MS Teams).</li> <li>Training and awareness to address procedures and the importance of social distancing.</li> <li>Toolbox talks to be conducted outdoors when possible in order for persons to maintain social distancing. Where inclement weather does not allow for this, toolbox talks to be conducted with smaller groupings of workers in a sheltered area large enough to maintain social distancing.</li> </ul>	<p><b>CONTRACTOR</b></p>

RISK DESCRIPTION	MITIGATION PLAN/ACTION	RESPONSIBILITY
<b>Signage</b>  Conflicting messages/notices displayed on the site in contravention with current requirements to respond to Covid-19	<p>The Principal Contractor is to review all current signs and notices displayed on site. The PC is to avoid conflicting messages/notices that have been in place prior to lockdown and review accordingly.</p> <p><b>a. Access rules</b> The contractor shall install additional signage with site rules specific to the prevention of spreading the COVID-19 virus at the access control points of the site.</p> <p><b>b. Notices/Posters with protocols</b> Notices and posters shall be placed and installed to raise awareness and regarding protocols to be followed on site. These notices and posters shall be placed conspicuously at various points on the site including the following places:</p> <ul style="list-style-type: none"> <li>• Entrance</li> <li>• Site notice board</li> <li>• Site Office</li> <li>• Eating areas</li> <li>• Next to toilets and bathrooms</li> <li>• Hand washing stations</li> <li>• Storerooms</li> </ul>	<b>CONTRACTOR</b>
<b>Emergency Planning</b>  Emergency plan not completed and undated in line with current Regulations of the National Disaster Management Act	<p>An updated emergency plan is to be completed that is in line with the current Regulations of the National Disaster Management Act.</p> <p><b>a. First aid</b> Extra gloves, and disinfectants are to be available, first aiders are to be issued with at least FFPT2 masks should they be required to respond</p> <p><b>b. Evacuation plans</b> Evacuation plans should consider social distancing.</p> <p><b>c. Isolation of potentially infected workers</b> The emergency plan is to consider how anyone who arrives on site and displays any of the symptoms, or has a raised temperature.</p>	<b>CONTRACTOR</b>



RISK DESCRIPTION	MITIGATION PLAN/ACTION	RESPONSIBILITY
<p><b>Welfare facilities</b></p> <p>Lack of procedures and arrangements for the provision of welfare facilities to prevent the spread of Covid-19 between employees on site</p>	<p>The Principal Contractor shall adapt arrangements regarding the provision of welfare facilities to be in line with Government guidelines and requirements.</p> <p><b>a. Clean, storage for food and personal belongings</b></p> <p>The Principal Contractor to provide lockable storage for all employees on site, which shall be disinfected daily. Training and awareness to address procedures and the importance of good hygiene practice.</p> <p><b>b. No personal belongings to be kept on site</b></p> <p>Apart from extra clean personal clothing no other personal belongings allowed on site except if kept in locker provided by the Principal Contractor.</p> <p><b>c. No communal drinking facilities (shared cups etc.)</b></p> <p>The Principal Contractor to provide adequate supplies of bottled water to all employees on site. Empty bottles to be disposed of as normal waste. Training and awareness to address procedures and the importance of good hygiene practice.</p> <p><b>d. Eating areas</b></p> <p>The Principal Contractor is to limit the number of employees at all activities to the minimum. Stagger lunchbreaks and resting periods for work teams. Training and awareness to address procedures and the importance of good hygiene practice and social distancing.</p> <ul style="list-style-type: none"> <li>Workers are required to stay on site once they have entered it and not use local shops.</li> <li>Dedicated eating areas should be identified on site to reduce food waste and contamination.</li> </ul> <p>Where catering is provided on site, it should provide pre-prepared and wrapped food only;</p> <ul style="list-style-type: none"> <li>Payments should be taken by contactless card wherever possible;</li> <li>Crockery, eating utensils, cups etc. should be disposable if supplied;</li> <li>Drinking water should be provided with enhanced cleaning measures of the tap mechanism introduced;</li> <li>Tables should be cleaned and disinfected between each use;</li> <li>All rubbish should be put straight in the bin and not left for someone else to clear up;</li> <li>All areas used for eating must be thoroughly cleaned at the end of each break and shift, including chairs, door handles, vending machines and payment devices.</li> </ul>	<p><b>CONTRACTOR AND EMPLOYEES</b></p>

RISK DESCRIPTION	MITIGATION PLAN/ACTION	RESPONSIBILITY
<p><b>Consequence Management</b></p> <p>Inadequate processes and procedures in place for consequence management</p>	<ul style="list-style-type: none"> <li>When non-compliance activities are noted, that activity will be stopped. Should the remedial actions not take place the site will be shut down till the corrective actions have been implemented.</li> <li>Employees that do not work according to the SSHSS and SSHSP must be disciplined according to the company's disciplinary codes and practices.</li> <li>Supervisory employees on site must ensure compliance, and when non conformances are noted disciplinary actions should also be followed.</li> <li>Principal Contractor's should note that they could be fined and even according to the Disaster Management Act, arrested.</li> </ul>	<p><b>CONTRACTOR</b></p>

**ANNEXURE 'A'**  
**(STAGE 4 LOCKDOWN)**  
**TEMPLATES REQUIRED FOR**  
**COVID-19 IMPLEMENTATION**  
**RISK COMPLIANCE**  
**AND FOR**  
**CONTINUATION OF WORK ON**  
**CONSTRUCTION SITES**

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## **Contents of Templates Required from Contractor**

No.	Description	Page
1	Risk Rotation per activity on site	12
2	COVID-19 Work Place Preparation Procedure	14
3	Tracking Record Log	18
4	Training Schedule (Contractor Employees)	19
5	COVID-19 Policy	20
5	COVID-19 case reporting template	23

### **GENERAL NOTE TO CONTRACTORS**

WITHIN THE "WORKPLACE PREPARATION PROCEDURE" THE CONTRACTORS ARE REQUIRED TO REPLACE THE HIGHLIGHTED TEXT IN 'RED'; "COMPANY" WITH THEIR 'COMPANY NAME'.

**RISK ROTATION PER ACTIVITY: CONTRACTORS ARE TO PROVIDE WITHIN THE DOCUMENTS ON PAGES 12 AND 13, THE TOTAL REQUIRED NUMBER OF WORK FORCE REQUIRED PER ACTIVITY (DOUBLE CLICK WITHIN THE DOCUMENT TO OPE THE EXCEL SPREAD SHEET TO EDIT THE AREA LABLED "TOTAL REQUIRED WORK FORCE" AND ENTER THE NUMBER REQUIRED PER ACCTIVITY)**

**DETERMINATION OF RISK PER ACTIVITY (DOUBLE CLICK IN WORK SHEET TO EDIT)**

RISK ROTATION PER ACTIVITY			
	Activity	Total required work force	Rotational work force per Activity
<b>1</b>	<b>Sub Structure</b>	<b>0</b>	
	Excavations		0
	Foundations		0
	Floor Scread		0
	Foundation Walls		0
<b>2</b>	<b>Super Structure</b>	<b>0</b>	
	Brick Layers		0
	Plasters		0
	Electrical First Fix		0
	Mechanical First Fix		0
	Plumbing First Fix		0
	Carpentry First Fix		0
	Painters First Fix		0
	Roof Structure		0
			0
			0
<b>3</b>	<b>Internal finishes</b>	<b>0</b>	
	Carpentry Second Fix		0
	Electrical Second Fix		0
	Plumbing Second Fix		0
	Mechanical Second Fix		0
	Painters Second Fix		0
	Tilers		0
	Floor Finishes		0
<b>4</b>	<b>Site Works</b>	<b>0</b>	
	Back fill excavations		0
	Removal of rubble		0
	Paving		0
	Fencing		0
	Road Works		0
	Land Scaping		0

RISK ROTATION PER ACTIVITY			
	Additional Activities identified	Total required work force	Rotational work force per Activity
5		0	
			0
			0
			0
			0
6		0	
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
7		0	
			0
			0
			0
			0
			0
			0
			0
8		0	
			0
			0
			0
			0
			0
			0

### **Contents of Workplace Preparation Procedures**

No.	Description	Page
1	Purpose	15
2	Scope	15
3	Responsibility	15
4	Implementing Workplace Controls	15
5	What to do When a Person Suspected or Confirmed to Have COVID-19 has been in the Workplace	17
6	Transport	17
7	Meetings	17
8	Tracking Record Log	18
9	Training Schedule	19

## 1. Purpose

To reduce the risk of COVID-19 outbreak in the workplace and the impact on workers, customers and the public.

## 2. Scope

Applies to all employees, clients, suppliers and sub-contractors who are associated with [Company]

## 3. Responsibility

- Contracts Managers and Supervisors  
Ensure all workers under their supervision adhere to specifics of this procedure
- COVID Manager  
Coordinate the COVID Management Plan/COVID Procedure on behalf of [Company]
- HSE Officers  
Develop a COVID-19 specific risk assessment, raise awareness in the workplace, conduct routine monitoring to ensure compliance and put in place corrective measures where required.
- Employees  
Cooperate with supervisors by adhering to set guidelines and lawful instructions.

## 4. Implementing Workplace Controls

The legislation governing workplaces in relation to COVID-19 is the Occupational Health and Safety Act (Act 85 of 1993) as amended in conjunction with the Hazardous Biological Agents Regulation.

A COVID-19 specific risk assessment together with a written policy concerning the health and safety of employees shall be drawn up and communicated to all employees and mitigation Measures which needs to be monitored and adjusted should the need arise.

### Workplace Controls:

- All offices (including site offices) will be sanitised before opening for business each day
- Place posters that encourage staying home when sick, cough and sneeze etiquette, and hand hygiene at the entrance of offices and sites.
- On-site induction with special emphasis on COVID-19 will be done with all employees upon return to work.
- Provide tissues and waste bins lined with a plastic bag so that they can be emptied without contacting the contents
- Instruct employees to clean their hands frequently, using soap and water for at least 20 seconds or with an alcohol-based hand sanitizer that contains at least 70% - 95% alcohol.
- Continue routine environmental cleaning, which includes tools and equipment.
- Increase ventilation in offices by natural or mechanical means
- Provide soap and water and/or alcohol-based hand rubs (at least 70%) in the workplace in multiple locations and in common areas to encourage hand hygiene.



- Practice social distancing (2m) as far as possible (no handshakes, hugs, kissing, horseplay or touching each other). Keep distance from each other while working on site. Supervisors will monitor this throughout the day.
- While queuing at the gate to enter the site, employees must stand in a line, with at least 2m between them.
- Desks for employees working in the office (site office) will be spaced at least 1.5m apart, or placement of one person per office will be implemented.
- ~~It is compulsory to wear face masks at all times. Each employee will be issued with two cloth face masks to wear at work and while commuting, with appropriate training on the use of these masks. Arrangements will be made for the washing, drying and ironing of cloth masks.~~
- Temperature testing will be done on all employees every morning upon arrival to site, and also randomly during the day. All readings will be recorded, monitored and sent to the SHEQ department. The testing will be conducted by the site safety officer. On sites where a full-time safety officer is not available, the responsibility will fall onto the supervisor.
- During the temperature screening, employees will be screened for any additional symptoms such as body aches, loss of smell or taste, nausea, vomiting, diarrhea, fatigue, weakness or tiredness. The results will be recorded in the Social Distancing Control Sheet and send to the SHEQ department. If an employee displays any of the symptoms, he will not be permitted to enter the site/offices.
- In addition to posters, brief employees and sub-contractors that anyone with a mild cough or low-grade fever (37.3 or more) needs to stay at home and take sick leave.
- Any employee who develops flu-like symptoms (i.e. cough, shortness of breath, fever) or any of the additional symptoms should inform his supervisor immediately.
- Where practical, the minimum number of employees will be allowed on site, and rotation staggered working hours and shift work may be implemented. Promote working from home for employees who are able to do so.
- All visitors to site will undergo induction and temperature screening and must be in possession of the appropriate PPE (i.e. face mask) prior to being allowed access to site. No access will be granted to visitors not complying.  
All visitors will be required to sanitize their hands before entering the site as well as when they leave.
- Sub-contractors shall ensure that all of their employees are issued with face masks and any other necessary PPE, and that hand sanitizer and soap is available for their employees. Temperature testing will be done by [Company] and records kept. Failure to do so will result in the sub-contractor employee/s being put off-site until compliant.
- A copy of the Essential Service Permit must be available on site at all times. All sub-contractors to provide a copy of their Permit prior to being granted permission to work.
- All employees are obliged to comply with measures introduced in the workplace.

## **5. What to do When an Employee on site becomes ill with COVID-19**

If someone becomes ill in the workplace and there is reason to suspect they may have contracted or come into contact with someone who has contracted the COVID-19 virus, the person must be isolated immediately, provided with a FFP1 surgical mask, and transport arranged for the employee to go home to be self-isolated or for medical examination. Ensure testing is done at an identified testing site.

The Department of Health and Department of Labour will be informed of any employees testing positive for COVID-19, where after an investigation will be conducted to establish the cause, including any control failures. The risk assessment will be reviewed to ensure necessary controls and PPE is in place.

The risk of transmission will be assessed, the employees working area disinfected.

If an employee is confirmed to have COVID-19, his/her fellow employees will be informed of their possible exposure to COVID-19 in the workplace and referred for screening, but confidentiality must be maintained at all times, and no discrimination shown toward an employee who tested positive for COVID-19.

If evidence exist that the employee contracted COVID-19 as a result of Occupation Exposure, a Claim for Compensation will be lodged in terms of the Compensation of Occupational Injuries and Diseases Act 1993 (Act No. 130 of 1993) in accordance with Notice 193 published on 3 March 2020.

Once an employee was positively diagnosed with COVID-19 and isolated in accordance with the Department of Health Guidelines, the employee may only return to work after he has undergone a medical evaluation confirming the employee has tested negative for COVID-19. The employee will be required to wear a face mask, maintain social distancing and adhere to cough and sneeze etiquette. The employee will also be monitored for symptoms upon his/her return to work.

## **6. Transport**

- Where transport is provided, occupancy of the vehicle should be reduced in line with social distancing practice.
- All passengers must wear face masks or respirators.
- All passengers to sanitize their hands before getting into the transport, as well as when disembarking.
- Transport vehicles should be sanitized before and after each trip.
- Employees making use of public transport to ensure they wear face masks and sanitize their hands regularly (before getting into the transport and when disembarking). Attempt to not touch any surfaces unless absolutely necessary.

## **7. Meetings**

Wherever possible, meetings to be held via tele or video conference in order to maintain social distancing and prevent the possible spread of COVID-19.

Toolbox talk meetings, inductions and briefing sessions should be done in open areas with social distancing in place.

### 8. Tracking Record log (Employees/Visitors)

[illegible]

9. Training Schedule (Employees)

Training Attendance Register

Training Description:		Session No

Date of training	
------------------	--

Time training started		Time training ended	
-----------------------	--	---------------------	--

Duration of training	
----------------------	--

Instructor name and signature	
-------------------------------	--

Training provided (Tick applicable box)			
Read only	Class Room	Practical Demonstration	Communicated Changes

Employee number	Employee name	Employee signature <i>(Signature indicates acknowledgement that training was understood)</i>	Type of training received

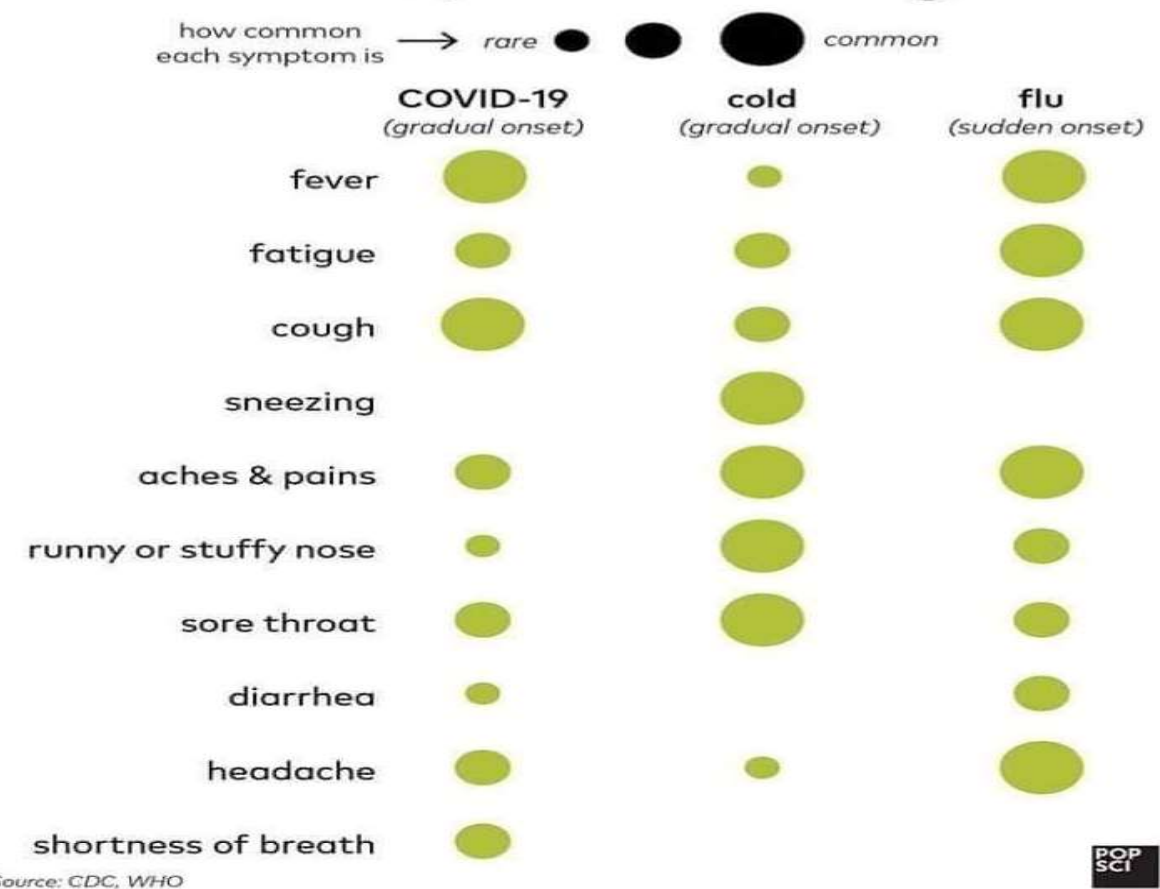
# Coronavirus Policy

The Occupational Health and Safety Act clearly dictates to employers that they need to ensure a working environment that is healthy and safe for all employees. In this regard, [Company] is therefore obligated to ensure that it always looks after its employees' well-being whilst the employees are at the workplace. [Company] will identify medical facilities in the area of operations that are best suited to evaluate and treat any employee that is suspected of having the virus.

Symptoms:

- Coughing
- Fever
- Shortness of Breath
- Pneumonia
- Vomiting
- Diarrhoea
- Sever pneumonia
- Kidney Failure

Is it coronavirus, or is it something else?



### **Transmittal of the Virus:**

- Direct contact
- Droplets from patient's coughing and sneezing
- Contact with patients' belongings followed by touching your mouth or nose.

### **Protecting Yourself:**

- Avoid contact with others, and wash your hands frequently
- Maintain good hygiene habits
- Wear a face mask when infected and when dealing with infected patient
- Use tissues when coughing or blowing nose
- Wash and prepare food carefully
- Exercise and proper sleep will bolster the immune system

### **Should you display any of the Symptoms:**

- Stay home and inform your supervisor telephonically of your absence.
- Obtain medical attention.
- Employees should follow the guidance as provided by the Department of Health and inform public authorities promptly.
- The Basic Conditions of Employment Act (BCEA). Section 22 thereof stipulates the period to which an employee is entitled to sick leave. Generally, an employee is entitled to 30 days sick leave during a 36 month or three-year cycle, following commencement of employment. Section 23 of the BCEA stipulates that should the employee be absent for a period longer than two consecutive days or be absent on more than two occasions during an eight-week period, the employer is not obliged to pay that employee their sick leave benefit unless that employee provides a valid medical certificate citing the reason for the incapacity during that period. Such a medical certificate must be issued and signed by a registered medical practitioner.
- If an employee is placed in compulsory quarantine and produces a valid medical certificate to that effect, the employer must deduct such period of absence from the employee's current sick leave cycle and also pay the employee the equivalent of the remuneration they would have received during this period. Should the employee have exhausted their sick leave allotment at the time of being placed in quarantine then, the employer may deduct this period either from the employee's annual leave or may choose to classify the absence as unpaid leave. In this regard, the employee may claim remuneration in terms of S20 of the Unemployment Insurance Fund (UIF) Act.
- If an employee chooses to voluntarily quarantine themselves on approval by his/her Manager, by staying at home to avoid contracting the virus, then this period of absence will not qualify as sick leave. Such period of absence will be taken out of the employees' normal leave cycle and if that employee no longer has any leave entitlement, then this period may be taken as unpaid leave.
- Should the employer reduce working hours as a consequence of the COVID-19 virus, then employees are entitled, as per Section 12 of the UIF Act to claim remuneration from the Fund if the reduction of hours or "unemployment" lasts longer than fourteen (14) days.
- An instance may arise whereby an employer seeks an employee to be placed in quarantine due to the employee having been in contact with an individual who has been diagnosed with the virus or perhaps

the employee has recently travelled overseas to an affected area or perhaps the employee presents with symptoms similar to those associated with the COVID-19. During such absence imposed by the employer, should the employee be diagnosed with the virus and the employee presents a valid medical certificate to that effect, the employer may treat such absence as sick leave. Due to the operational requirements, the employer may assign tasks to the employee which they can then carry out at home or at their chosen site of quarantine should the employer deem it necessary for their employees to be quarantined. If the employees render services from home during this period, they will be entitled to their normal remuneration, and no leave may be deducted.

- Should an unlikely scenario arise whereby The State declares that schools and businesses are to be closed because of the virus, then such an instruction would be through no fault of the employer. After receiving such instruction, employers should consult with their employees and discuss an appropriate way to deal with the shut-down. If the operational requirements of the employer permits, then perhaps the time during which the business is closed can be seen as annual leave. Or, if the employer implements a system of working from home, then this work will be with pay.
- In the case of a positive outcome for the Coronavirus, the site where the affected employee is from will be closed and the rest of the employees will be tested and quarantined.

The most important thing to do is stay calm, carry on as usual and exercise good personal hygiene habits.

## 10. COVID-19 Case Reporting Template

---

Reporter Name

First Name

Last Name

Reporter Phone

Number

Area Code

Phone Number

Reported Name

First Name

Last Name

Reported Phone

Number

Area Code

Phone Number

Report Date & Time

Date

Hour

Minutes

When did you first

Suspect?

Date

Hour

Minutes

Why are you reporting this person?

☐ Coughing

☐ Fever

☐ Having shortness of breath

☐ Feeling persistent pain or pressure in the chest

☐ Having confusion or inability to arouse

☐ Just came from abroad, carrying highly risk of COVID-19

Comments





## **Addendum to the health and safety specification document.**

### **COVID-19 pandemic**

**Site Name:**

**Date:**

**Principal Contractor Name:**

**Contractor Name:**

**COVID-19 should not be allowed to destroy the construction sector, or our income in this sector. We are committed to working with government and the private sector towards ensuring that returning to work will achieve the envisioned economic prosperity for all employees and the country as a whole.**

You are going to start working on the site as soon as it is allowed by Government. That means you must have a Covid - 19 management plan that form part of your health and safety plan, as an addendum, in your safety file. The Covid - 19 management plan must be developed by a competent person.

Your Covid - 19 management plan must be site specific and practically viable and must cover this sites anticipated areas where infections are likely to occur on your site area. All persons in your employ on site must be trained in your Covid - 19 management plan. The attendance register for the training must be attached to the Covid - 19 management plan.

Your CEO and site management must endorse (sign) the Covid - 19 management plan.

***The Regulation that govern your Covid - 19 management plan have not been promulgated yet. We are however being pro-active in this regard. If and when the Regulations are promulgated and published in the Government Gazette, we will amend this addendum to correspond with the Regulations. We do not foresee major changes in the draft Regulations.***

**Your Covid - 19 management plan must contain at least the following:**

- a. A schematical drawing of the actual workarea and where the actual work will be performed.
- b. Health Risk Assessment:
  - i This risk assessment must form part of your management plan. We do not want it as a separate document. It must physically form part of the Covid - 19 management plan. Bind it within the plan document.
  - ii Different areas in the workplace might require different methods of safeguarding the employees. In that case specify the area and determine the risks and mitigating measures of that specific area.
- c. What are the symptoms and how to identify them in the workplace?
- d. Screening of workers. How will it be done and when?
- e. If someone is suspected of having the Covid -19 virus, what will the procedure be?
- f. If an employee suspects that he/she has contracted the virus, what would the procedure be?

- g. What PPE will be issued and when?
- h. Quarantine:- self quarantine, forced quarantine, what will your procedure and policy be?
- i. Working from home guidelines. (When, who, etc.)
- j. Safe travelling to and from work.
- k. How will you safeguard meetings? Precautions during meetings?
- l. Hygiene in the workplace:

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## Page 2

- i. Disinfecting workplace, tools, facilities, etc.
- ii. Disinfecting hands and bodyparts.
- iii. Methods of disinfecting that will be used.
- iv. What type of disinfectant?
- m. Physical contact. (Control, who, when, etc.)
- n. Training of employees
- o. Cross Provincial border travel of employees.
- p. Keeping record and communicating vital information of cases detected on site.
- q. Visitors to the site.
- r. Social distancing on site.
- s. Employee awareness program.
- t. Regularly cleaning common contact surfaces on site?
- u. How will you treat drivers that deliver to site?
- v. Handwashing facilities. (Where, when, how many, type, etc)
- w. Provision and disposal of hand towels.
- x. Cleaning regimes for toilet facilities particularly door handles, locks and the toilet flush.
- y. Portable toilet hygiene.
- z. Break times, how will you reduce congestion and contact?
- aa Hygiene at water drinking stations.
- ab Tracing of infected employees.
- ac Your weekly Covid - 19 reports that must be submitted to the Client.
- ad Congestion at the workplaces.
- ae Consequence of not adhering to the Covid - 19 management plan, the risk assessment and the policy.
- af You must develop a Covid - 19 Policy.
- ag How will you manage your contractors on site regarding the Covid - 19?

The required document must be submitted to DPW Consultants/Projectmanagers/OHS Managers. We will issue a letter of approval if all the requirements in this addendum to the health and safety plan, have been met. Please note that these requirements are minimum requirements only and all of the items must be addressed in your Covid - 19 management plan, risk assessment and Covid - 19 policy document.

***The index to your Covid - 19 File should contain at least the following:***

- |                                     |                                    |
|-------------------------------------|------------------------------------|
| 1 Covid - 19 Management plan        | 7 Toolbox Talks                    |
| 2 Covid - 19 Risk Assessment        | 8 Safe Work Procedures             |
| 3 Covid 19 Policy                   | 9 Checklists                       |
| 4 Employee Screening declarations   | 10 Training Material               |
| 5 PPE Issue Register                | 11 Posters                         |
| 6 Compliance Employees Appointments | 12 Compliance Officer Appointments |

I herewith my signature confirm that I have received this Covid - 19 specification document.

This specs was developed for Construction sites.



## **DECLARATION – EPWP PROGRAMME**

I \_\_\_\_\_ from company

\_\_\_\_\_ .

Hereby Undertake To Comply To:

### **1. LABOUR INTENSIVE CONSTRUCTION METHODS (LIC)**

1.1 Comply To Implementation Of LIC BOQ Items Specified Elsewhere In The Tender Documents.

### **2. RECRUITMENT AND PLACEMENT OF EPWP NYS PARTICIPANTS**

2.1 Recruitment, Placement And Exposure Training Of 25 (Twenty Five) Participants

2.2 Comply To EPWP BOQ, Specifications And Code Of Good Practice

### **3. RECRUITMENT AND PLACEMENT OF LOCAL LABOURERS**

3.1 Recruitment And Placement Of 6 (Six) Local Labourers

3.2 Comply With Applicable Wage Order/Determination or Agreement, In Terms of Labour Relations Act or Wage Act

### **4. COMPLY TO EPWP MONTHLY REPORTING REQUIREMENTS**

Monthly prepare and submit below EPWP reports attached to monthly payments certificate:

4.1 All Employees and EPWP Participants Contracts

4.2 All Employees and EPWP Participants Certified SA ID Copies

4.3 All Employees and EPWP Attendance Register

4.4 All Employees and EPWP Proof of Payment

4.5 EPWP Reports Populated on Standard Templates

### **5. PENALTIES FOR NON COMPLIANCE**

Acknowledge Non Compliance Penalty of R3000-00 (Three thousand rand) Per Month Per Participant

**Signed by** : \_\_\_\_\_  
**Director of the Company**

**Company name** : \_\_\_\_\_

**Date:** : \_\_\_\_\_

## Part C4: Site Information

## PG-03.1 (EC) SITE INFORMATION – GCC (2010) 2<sup>nd</sup> Edition 2010

<b>Project title:</b>	<b><i>Bloemfontein High Court: Upgrading and Renovating of the Electrical Systems including Back-up Generator</i></b>			
<b>Tender no:</b>	<i>BL 22/008</i>	<b>WCS no:</b>		<b>Reference no:</b> <i>14/2/1/4/18/6706</i>

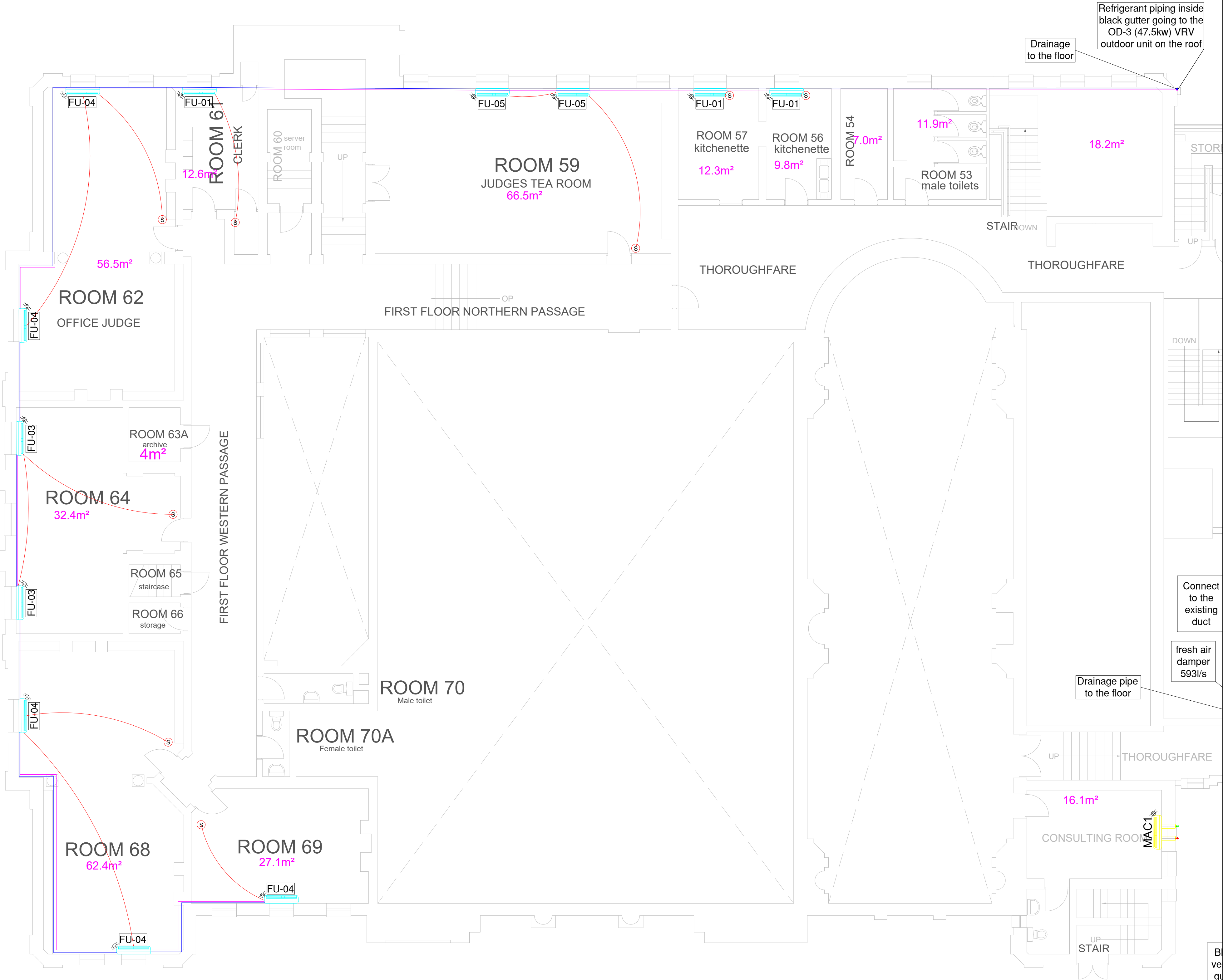
### C4 Site Information

- *Upgrading and Renovating of the Electrical Systems including Back-up Generator*
- *Co-ordinates are 20 President Brand Street, Bloemfontein Central, Bloemfontein, 9301*
- *29.11831 , 26.304510*



NOTES

- Contractor(s) are to confirm all dimensions on site prior to commencement of construction and any discrepancies are to be reported to the Mechanical Engineer.
- Ducting to be manufactured in accordance to SMACNA standards.
- All duct penetrations shall be isolated from the wall by means of high-density gloss fibre of at least 25mm thickness.
- Galvanised steel shall be used for all HVAC ducting.
- All ducting shall be provided with mezz flanges.
- All open-end ducts to be capped off with plastic prior to delivery on-site.
- All flexible ducting shall be not more than 1.5m long.
- Refrigerant piping, control and electrical wiring in ceiling void to run on cable trays. Exposed piping and wiring to run in trunking.
- All HVAC equipment to be protected against vibrations by means of anti-vibration mountings.
- All specified equipment must be installed according to the manufacturer's specification.
- All air diffusion equipment to be powder coated according to architect's specified colour.
- To prepare his construction/shop drawings, the HVAC sub-contractor must inspect all the architects drawings including structural and other services design drawings pertaining to the works and shall acquaint himself with the general arrangement of all other services and ensure that in fixing his work it will not obstruct the fixing or future maintenance of other services.
- All electrical installations shall be executed by qualified electrician, and issue COC.
- All duct work shall be sealed, and pressure tested such that air leakages shall be not more than 5% of total airflow. Test results shall be recorded and readily available should they be required before issuing O&M.
- Control panels for AC shall be 1.4m AFFL.



No.	DATE	AMENDMENT	D.P.W.

Legends

- (S) WIRED REMOTE CONTROLLER
- (B) BMS SYSTEM
- (P) SINGLE PHASE POWER SUPPLY (BY ELECTRICAL CONTRACTOR)
- (P) THREE PHASE POWER SUPPLY (BY ELECTRICAL CONTRACTOR)
- (P) DRAIN POINT (BY CIVIL CONTRACTOR)
- (P) CONDENSATE DRAIN PIPING
- (P) REFRIGERANT PIPING

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Department: Trade and Industry  
REPUBLIC OF SOUTH AFRICA

Consultant:

Department: Public Works  
REPUBLIC OF SOUTH AFRICA

discipline MECHANICAL

service HVAC

BLOEMFONTEIN HIGH COURT

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FOR TENDER PURPOSES	
FOR CONSTRUCTION	

WCS number 054928

drawing title BLOCK A FIRST FLOOR

ref. no. \_\_\_\_\_ designed MM. MATJOI

scale NTS drawn MM. MATJOI

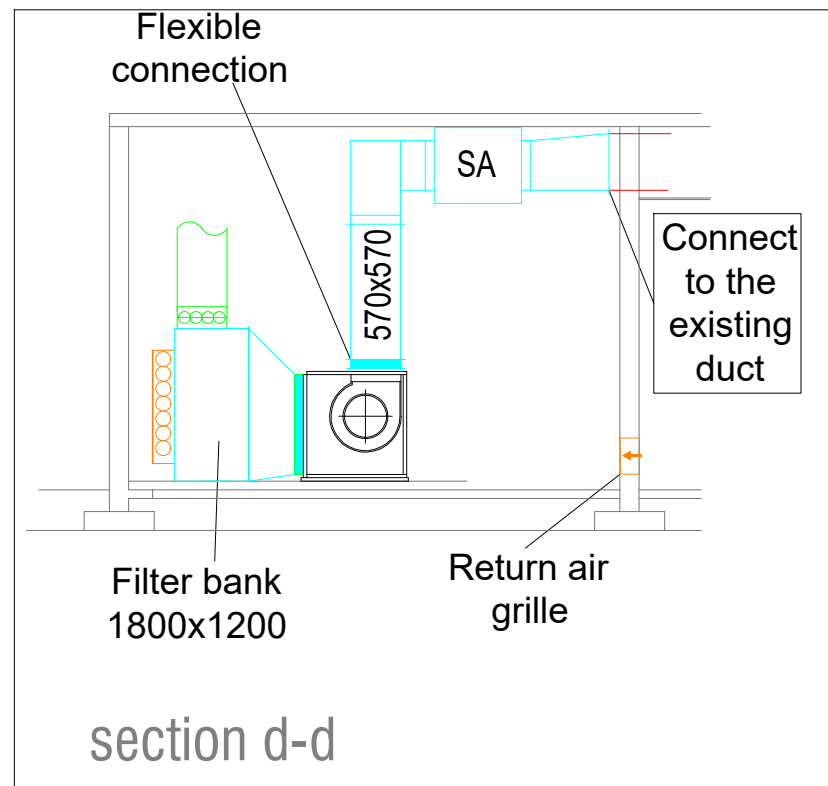
date MAY 2020 checked M. TLADI

drawing number ME304137

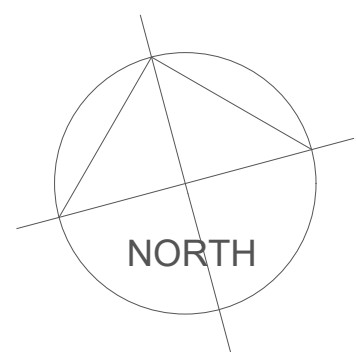
AIR CONDITIONER SCHEDULE (BLOCK B SECOND FLOOR)							
UNIT No.	COOLING LOAD	SENSIBLE COOLING	SENSIBLE HEATING	POWER SUPPLY (ALL TERMINATING IN ISOLATOR AT INDOOR, BY ELECTRICAL CONTRACTOR, CONNECTION TO UNIT BY A/C CONTRACTOR)	SYSTEM TYPE	LENGTH/ WIDTH /HEIGHT	QUANTITY
FU-01	2.2kW	1.43kW	1.56kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRF floor standing indoor unit		3
FU-03	3.6kW	2.34kW	2.4kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRF floor standing indoor unit		2
FU-04	4.5kW	2.93kW	3.0kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRF floor standing indoor unit		5
FU-05	5.6kW	3.64kW	3.78kW	220-240V / 1 Ph / 0.053 kW / 16A POWER POINT	VRF floor standing indoor unit		2
OD-03	37.3kW	24.3kW	25.0kW	380-415V / 3 Ph / 10.7 kW / 32A POWER POINT	VRF heat recovery outdoor unit		1
MAC-1	3.1 kW	2.0 kW	2.1 kW	220-240V / 1 Ph / 0.98 kW / 4.3 A POWER POINT	Compact unit (heritage)		1









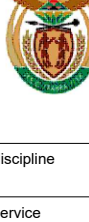
1. Contractor(s) are to confirm all dimensions on site prior to commencement of construction and any discrepancies are to be reported to the Mechanical Engineer.
2. Ducting to be manufactured in accordance to SMACNA standards.
3. All duct penetrations shall be isolated from the wall by means of high-density glass fibre of at least 25mm thickness.
4. Galvanised steel shall be used for all HVAC ducting.
5. All ducting shall be provided with mezz flanges.
6. All open-end ducts to be capped off with plastic prior to delivery on-site.
7. All flexible ducting shall be not more than 1.5m long.
8. Refrigerant piping, control and electrical wiring in ceiling void to run on cable trays. Exposed piping and wiring to run in trunking.
9. All HVAC equipment to be protected against vibrations by means of anti-vibration mountings.
10. All specified equipment must be installed according to the manufacturer's specification.
11. All air diffusion equipment to be powder coated according to architect's specified colour.
12. To prepare his construction/shop drawings, the HVAC sub-contractor must inspect all the architects drawings including structural and other services design drawings pertaining to the works and shall acquaint himself with the general arrangement of all other services and ensure that in fixing his work it will not obstruct the fixing or future maintenance of other services.
13. All electrical installations shall be executed by qualified electrician, and issue COC.
14. All duct work shall be sealed, and pressure tested such that air leakages shall be not more than 5% of total airflow. Test results shall be recorded and readily available should they be required before issuing O&M.
15. Control panels for AC shall be 1.4m AFFL.



AIR CONDITIONER SCHEDULE (Floor G)					
UNIT No.	COOLING LOAD	HEATING LOAD	ALL TERMINATING IN ISOLATOR AT INDOOR UNITS, BY ELECTRICAL CONTRACTOR, CONNECTION TO UNIT BY A/C CONTRACTOR.	TYPE HEATING	QUANTITY
OD-5	40.0 kW	40.0 kW	380-415V / 3 Ph / 11.3 kW / 32A POWER POINT	VRV heat recovery outdoor unit	0
FU-01	2.2 kW	2.5 kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRV Round flow cassette	3
FU-03	3.6 kW	4.0 kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRV Round flow cassette	3
FU-04	4.5 kW	5.0 kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRV Round flow cassette	2
FU-05	5.6 kW	6.3 kW	220-240V / 1 Ph / 0.053 kW / 16A POWER POINT	VRV Round flow cassette	1
FU-06	7.1 kW	8.0 kW	220-240V / 1 Ph / 0.061 kW / 16A POWER POINT	VRV Round flow cassette	1
AC-03	35 kW	35 kW	380-415V / 3 Ph / 26.9 kW / 47.9A POWER POINT	Fixed speed split hideaway	2
AC-03	35 kW	35 kW	380-415V / 3 Ph / 26.9 kW / 47.9A POWER POINT	Fixed speed split outdoor	2



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No.	DATE	AMENDMENT	D.P.W.
<p>legends</p> <p><b>S</b> WIRED REMOTE CONTROLLER</p> <p><b>B</b> BMS SYSTEM</p> <p> SINGLE PHASE POWER SUPPLY (BY ELECTRICAL CONTRACTOR)</p> <p> THREE PHASE POWER SUPPLY (BY ELECTRICAL CONTRACTOR)</p> <p> DRAIN POINT (BY CIVIL CONTRACTOR)</p> <p> CONDENSATE DRAIN PIPING</p> <p> REFRIGERANT PIPING</p>			
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<p>Client:</p> <div>  <div> <p><b>the doj &amp; cd</b></p> <p>Department: Trade and Industry REPUBLIC OF SOUTH AFRICA</p> </div> </div>			
<p>Consultant:</p> <div>  <div> <p><b>public works</b></p> <p>Department: Public Works REPUBLIC OF SOUTH AFRICA</p> </div> </div>			
<p>discipline <b>MECHANICAL</b></p> <p>service <b>HVAC</b></p> <p><b>BLOEMFONTEIN HIGH COURT</b></p>			
<p>WCS number <b>054928</b></p> <p>drawing title</p> <p><b>BLOCK A GROUND FLOOR</b></p>			
<p>ref.no. -</p> <p>scale NTS</p> <p>date MAY 2020</p> <p>drawing number</p>		<p>designed MM. MATJOI</p> <p>drawn MM. MATJOI</p> <p>checked M. TLADI</p>	
<p><b>ME304137</b></p>			



Refrigerant piping inside black gutter going to the OD-3 (47.5kw) VRF outdoor unit on the roof

18.2m²

18.2m²

ROOM 28  
16.8m²

ROOM 29  
15.3m²

ROOM 30  
36.7m²

ROOM 32  
OFFICE JUDGE  
to be checked  
44.2m²

ROOM 26  
OFFICE JUDGE  
42.3m²

ROOM 27  
OFFICE JUDGE  
36.0m²

ROOM 31  
PASSAGE

ROOM 33  
16.4m²

ROOM 34  
18.9m²

ROOM 35  
LIBRARY  
90.4m²

ROOM 126/130  
COURT F130  
110.6m²

ROOM 125/128  
COURT E128  
111.3m²

MOTION COURT HALLWAY

132  
6.8m²

134

CONSULTATION  
ROOM 137  
14.8m²

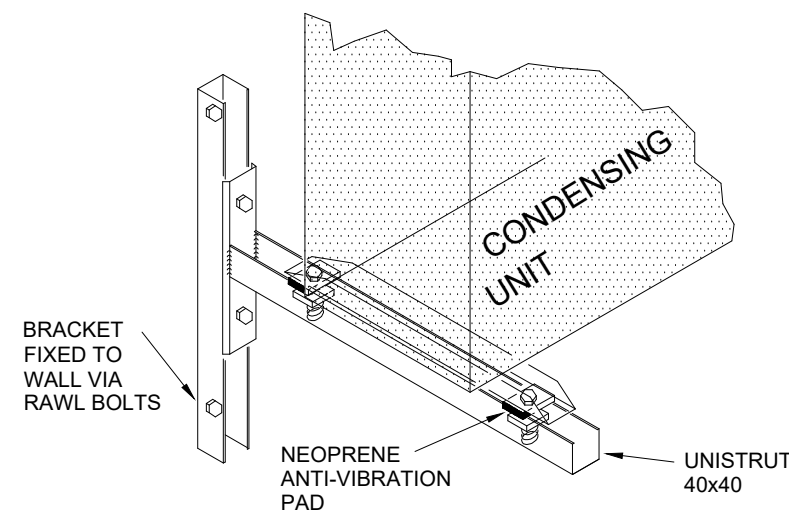
CONSULTATION  
ROOM 136  
17.9m²

AIR CONDITIONER SCHEDULE (BLOCK B SECOND FLOOR)

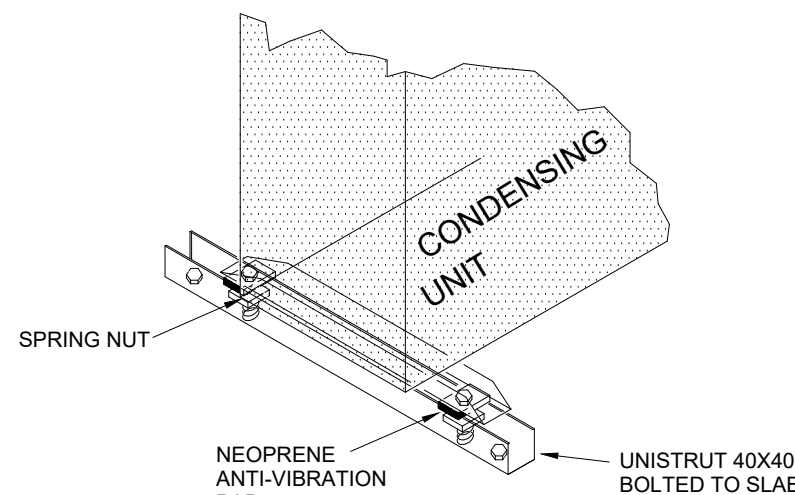
UNIT No.	COOLING LOAD	SENSIBLE COOLING	SENSIBLE HEATING	POWER SUPPLY (ALL TERMINATING IN ISOLATOR AT INDOOR, BY ELECTRICAL CONTRACTOR, CONNECTION TO UNIT BY A/C CONTRACTOR)	SYSTEM TYPE	LENGTH/ WIDTH /HEIGHT	QUANTITY
FU-02	2.8kW	1.82kW	1.92kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRF floor standing indoor unit		2
FU-03	3.6kW	2.34kW	2.4kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRF floor standing indoor unit		6
FU-04	4.5kW	2.93kW	3.0kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRF floor standing indoor unit		1
FU-05	5.6kW	3.64kW	3.78kW	220-240V / 1 Ph / 0.053 kW / 16A POWER POINT	VRF floor standing indoor unit		1
OD-02	37.3kW	24.3kW	25.0kW	380-415V / 3 Ph / 10.7 kW / 32A POWER POINT	VRF heat recovery outdoor unit		1
CU-01	3.5kW	2.28kW	2.4kW	220-240V / 1 Ph / 1.14 kW / 10A POWER POINT	Inverter split cassette indoor unit		2
SOU-01	3.5kW	2.28kW	2.4kW	220-240V / 1 Ph / 1.14 kW / 10A POWER POINT	Inverter split cassette outdoor unit		2
AC-01	25.0kW	16.3kW	16.9kW	380-415V / 3 Ph / 8.4 kW / 13.5A POWER POINT	Inverter type hideaway indoor unit	1425/500/928	2
OAC-01	25.0kW	16.3kW	16.9kW	380-415V / 3 Ph / 8.4 kW / 13.5A POWER POINT	Inverter type split outdoor unit		2

## NOTES

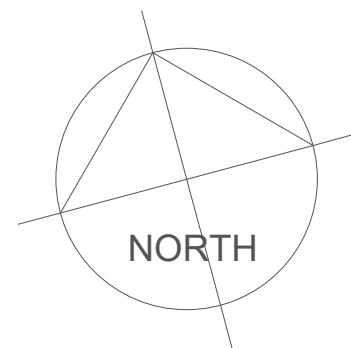
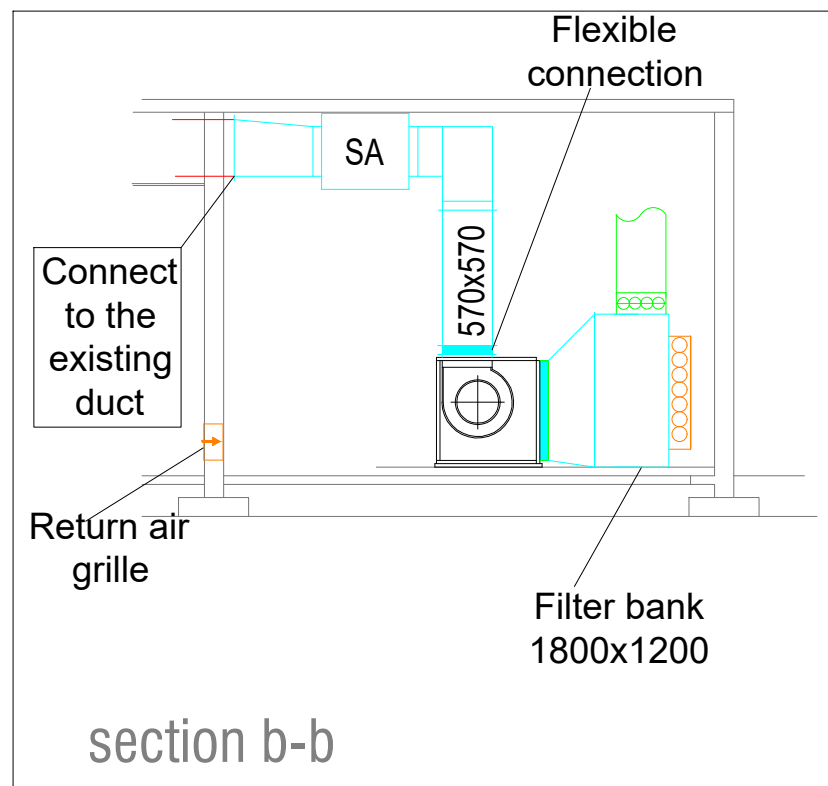
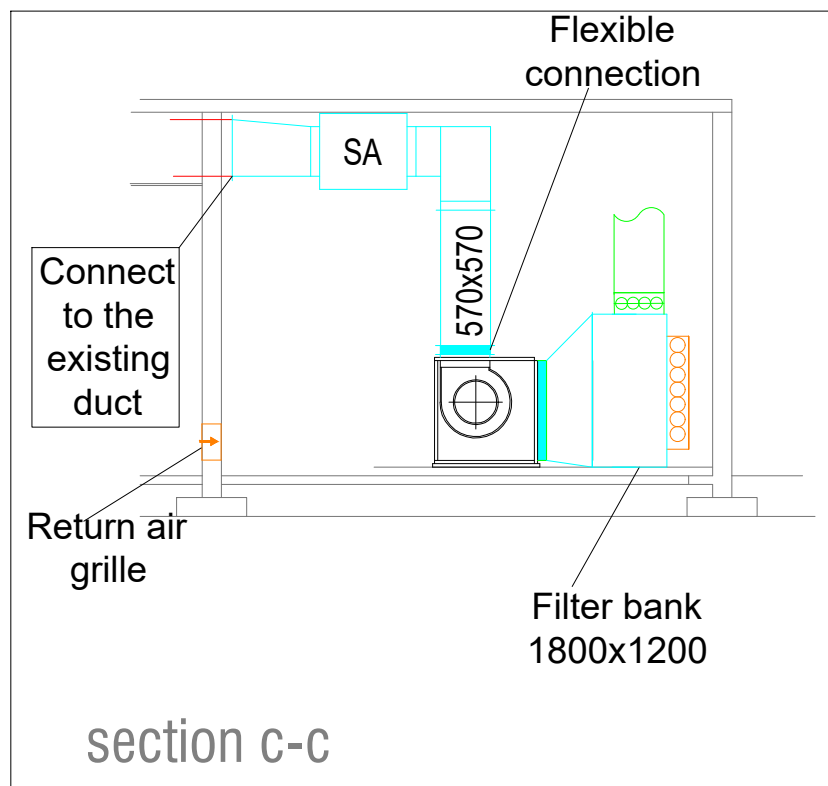
- Contractor(s) are to confirm all dimensions on site prior to commencement of construction and any discrepancies are to be reported to the Mechanical Engineer.
- Ducting to be manufactured in accordance to SMACNA standards.
- All duct penetrations shall be isolated from the wall by means of high-density gloss fibre of at least 25mm thickness.
- Galvanised steel shall be used for all HVAC ducting.
- All ducting shall be provided with mezz flanges.
- All open-end ducts to be capped off with plastic prior to delivery on-site.
- All flexible ducting shall be not more than 1.5m long.
- Refrigerant piping, control and electrical wiring in ceiling void to run on cable trays. Exposed piping and wiring to run in trunking.
- All HVAC equipment to be protected against vibrations by means of anti-vibration mountings.
- All specified equipment must be installed according to the manufacturer's specification.
- All air diffusion equipment to be powder coated according to architect's specified colour.
- To prepare his construction/shop drawings, the HVAC sub-contractor must inspect all the architects drawings including structural and other services design drawings pertaining to the works and shall acquaint himself with the general arrangement of all other services and ensure that in fixing his work it will not obstruct the fixing or future maintenance of other services.
- All electrical installations shall be executed by qualified electrician, and issue COC.
- All duct work shall be sealed, and pressure tested such that air leakages shall be not more than 5% of total airflow. Test results shall be recorded and readily available should they be required before issuing O&M.
- Control panels for AC shall be 1.4m AFFL.



OUTDOOR UNIT WALL MOUNTING DETAIL



OUTDOOR UNIT SLAB MOUNTING DETAIL



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No.	DATE	AMENDMENT	D.P.W.

Legends
(S) WIRED REMOTE CONTROLLER
(B) BMS SYSTEM
(SP) SINGLE PHASE POWER SUPPLY (BY ELECTRICAL CONTRACTOR)
(TP) THREE PHASE POWER SUPPLY (BY ELECTRICAL CONTRACTOR)
(DP) DRAIN POINT (BY CIVIL CONTRACTOR)
(CP) CONDENSATE DRAIN PIPING
(RP) REFRIGERANT PIPING

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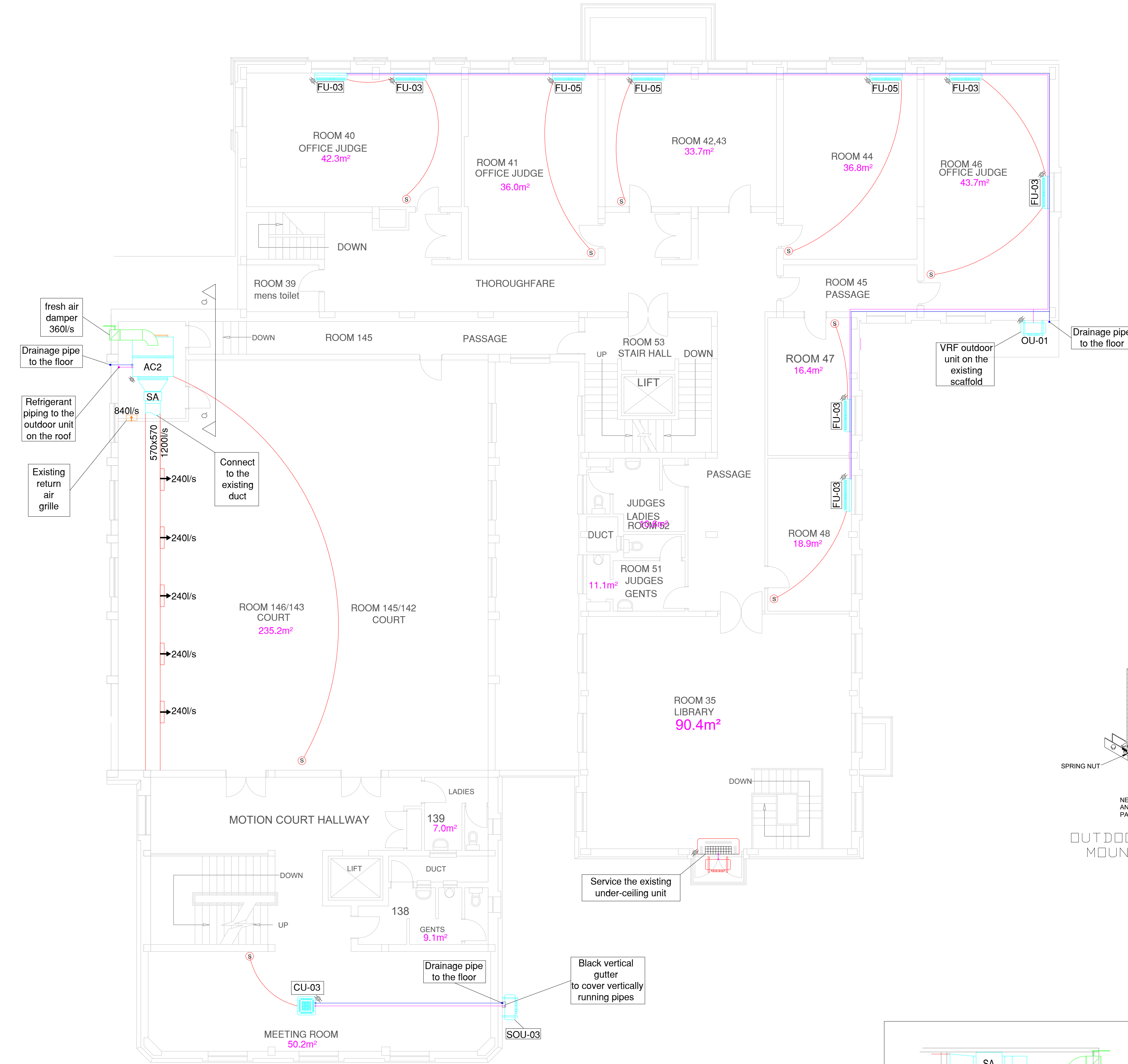
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Department: Public Works REPUBLIC OF SOUTH AFRICA

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discipline	MECHANICAL
service	HVAC

BLOEMFONTEIN HIGH COURT	
WCS number	054928
drawing title	BLOCK B FIRST FLOOR
ref. no.	designed MM. MATJOI
scale NTS	drawn MM. MATJOI
date MAY 2020	checked M. TLADI
drawing number	ME304137

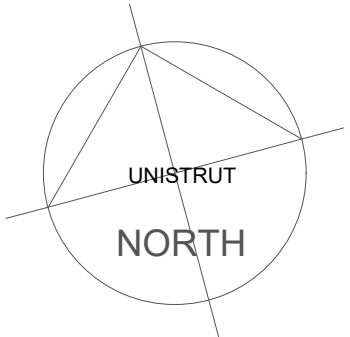
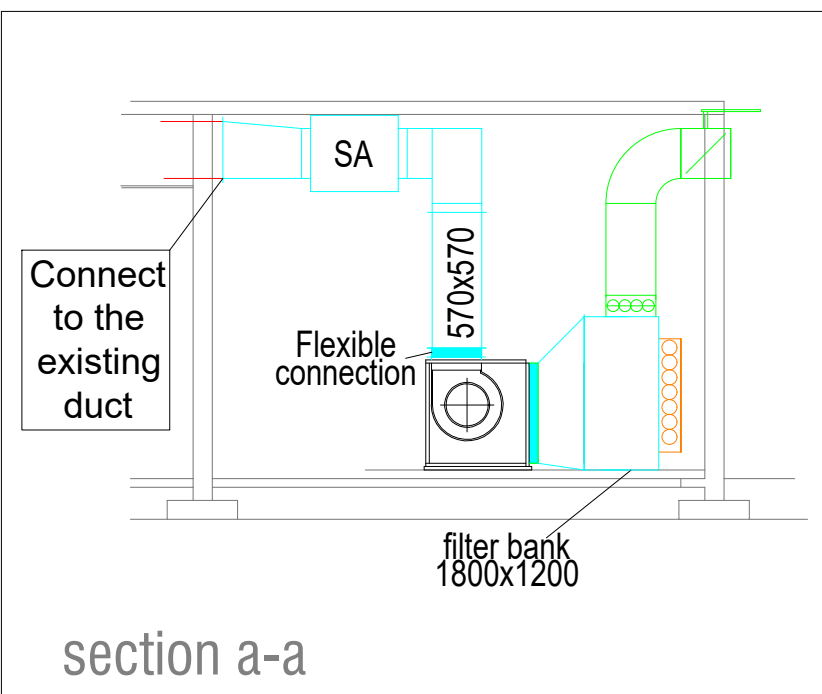
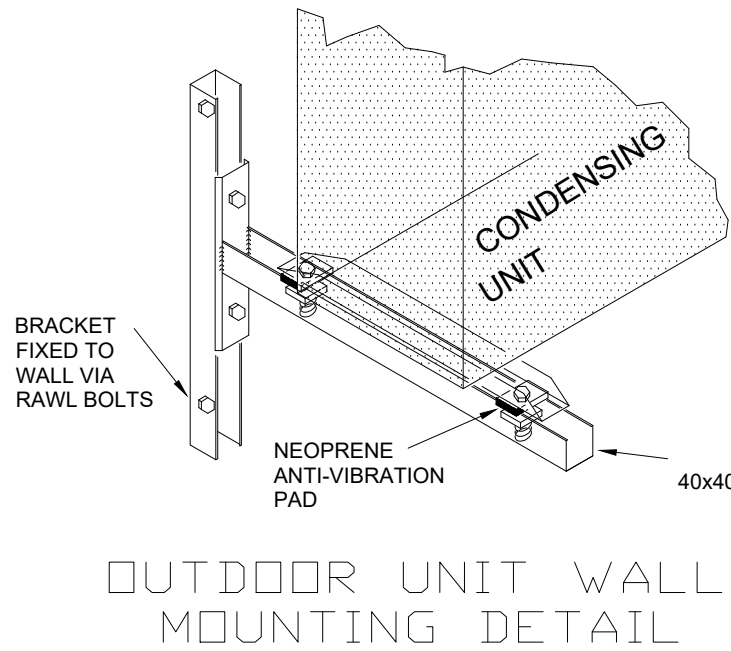
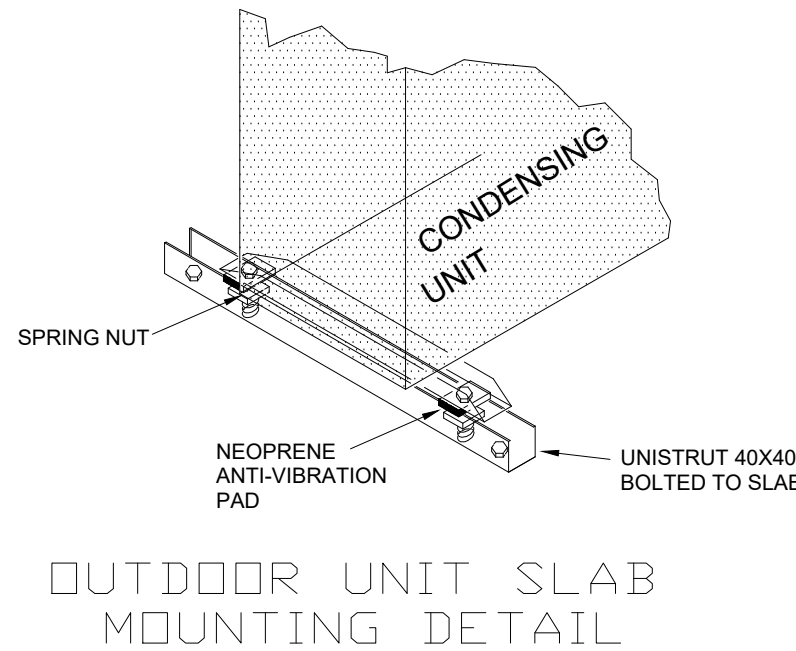




AIR CONDITIONER SCHEDULE (BLOCK B SECOND FLOOR)							
UNIT No.	COOLING LOAD	SENSIBLE COOLING	SENSIBLE HEATING	POWER SUPPLY <small>(ALL TERMINATING IN ISOLATOR AT INDOOR, BY ELECTRICAL CONTRACTOR, CONNECTION TO UNIT BY A/C CONTRACTOR)</small>	SYSTEM TYPE	LENGTH/ WIDTH /HEIGHT	QUANTITY
FU-03	3.6kW	2.34kW	2.4kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRF floor standing indoor unit		6
FU-05	5.6kW	3.64kW	3.78kW	220-240V / 1 Ph / 0.053 kW / 16A POWER POINT	VRF floor standing indoor unit		3
OD-01	38.4kW	19.5kW	20.34kW	380-415V / 3 Ph / 10.7 kW / 32A POWER POINT	VRF heat recovery outdoor unit		1
CU-03	10.5kW	6.83kW	7.02kW	220-240V / 1 Ph / 3.75 kW / 23A POWER POINT	Inverter split cassette indoor unit		1
SOU-03	10.5kW	6.83kW	7.02kW	220-240V / 1 Ph / 3.75 kW / 23A POWER POINT	Inverter split cassette outdoor unit		1
AC-02	49.8kW	32.4kW	34.2kW	380-415V / 3 Ph / 32.2 kW / 53.8A POWER POINT	Fixed speed hideaway indoor unit	1280/1135/980	1
AC-02	49.8kW	32.4kW	34.2kW	380-415V / 3 Ph / 32.2 kW / 53.8A POWER POINT	Fixed speed split outdoor unit	1390/1615/765	1

### NOTES

- Contractor(s) are to confirm all dimensions on site prior to commencement of construction and any discrepancies are to be reported to the Mechanical Engineer.
- Ducting to be manufactured in accordance to SMACNA standards.
- All duct penetrations shall be isolated from the wall by means of high-density gloss fibre of at least 25mm thickness.
- Galvanised steel shall be used for all HVAC ducting.
- All ducting shall be provided with mezz flanges.
- All open-end ducts to be capped off with plastic prior to delivery on-site.
- All flexible ducting shall be not more than 1.5m long.
- Refrigerant piping, control and electrical wiring in ceiling void to run on cable trays. Exposed piping and wiring to run in trunking.
- All HVAC equipment to be protected against vibrations by means of anti-vibration mountings.
- All specified equipment must be installed according to the manufacturer's specification.
- All air diffusion equipment to be powder coated according to architect's specified colour.
- To prepare his construction/shop drawings, the HVAC sub-contractor must inspect all the architects drawings including structural and other services design drawings pertaining to the works and shall acquaint himself with the general arrangement of all other services and ensure that in fixing his work it will not obstruct the fixing or future maintenance of other services.
- All electrical installations shall be executed by qualified electrician, and issue COC.
- All duct work shall be sealed, and pressure tested such that air leakages shall be not more than 5% of total airflow. Test results shall be recorded and readily available should they be required before issuing O&M.
- Control panels for AC shall be 1.4m AFFL.



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No.

DATE

AMENDMENT

D.P.W.

Legends

(S) WIRED REMOTE CONTROLLER

(B) BMS SYSTEM

(S) SINGLE PHASE POWER SUPPLY (BY ELECTRICAL CONTRACTOR)

(S) THREE PHASE POWER SUPPLY (BY ELECTRICAL CONTRACTOR)

(S) DRAIN POINT (BY CIVIL CONTRACTOR)

(S) CONDENSATE DRAIN PIPING

(S) REFRIGERANT PIPING

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Consultant:



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Department:  
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discipline

MECHANICAL

service

HVAC

BLOEMFONTEIN HIGH COURT

WCS number

054928

drawing title

BLOCK B SECOND FLOOR

ref. no.

designed

MM. MATJOI

scale

NTS

drawn

MM. MATJOI

date

MAY 2020

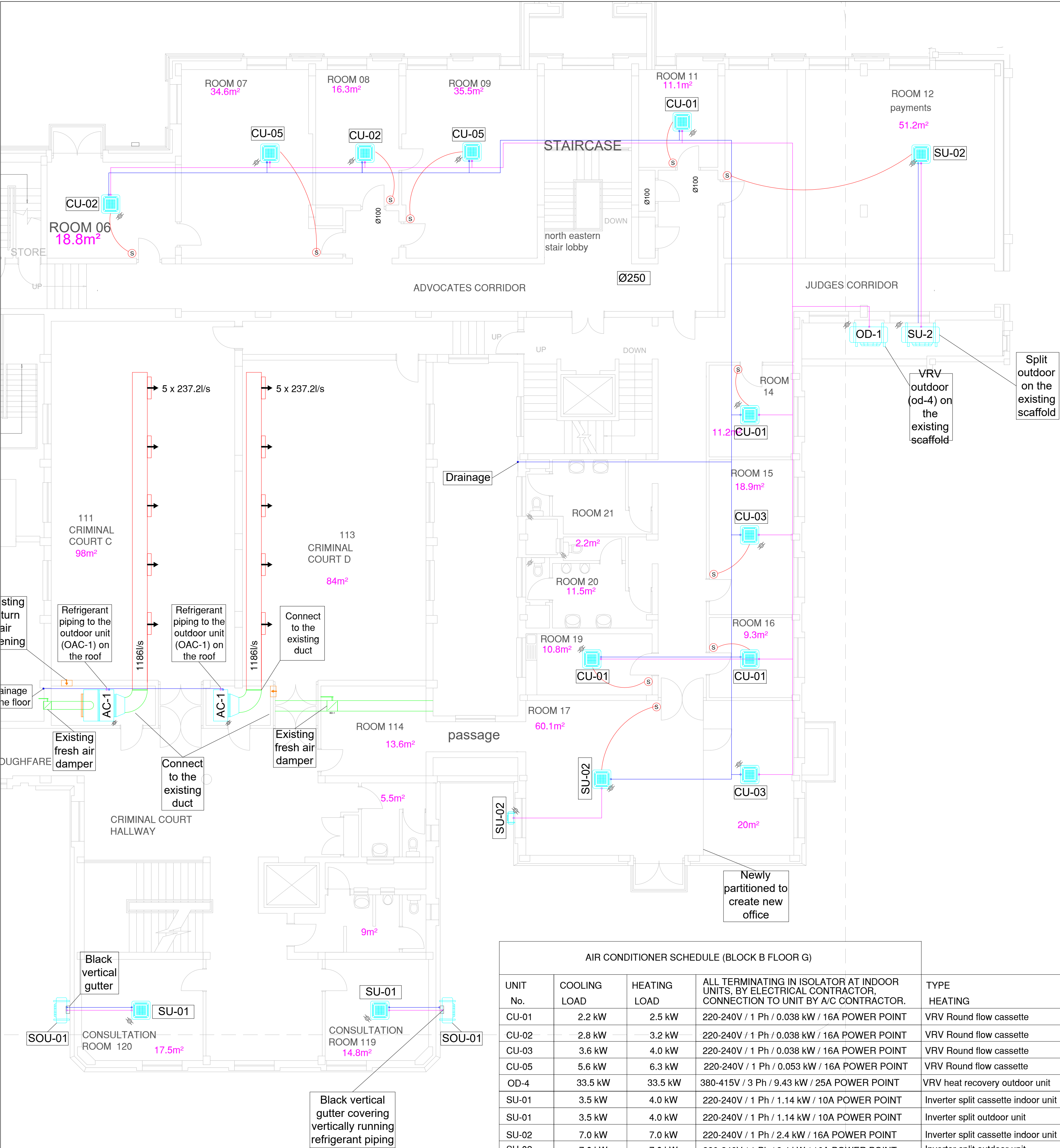
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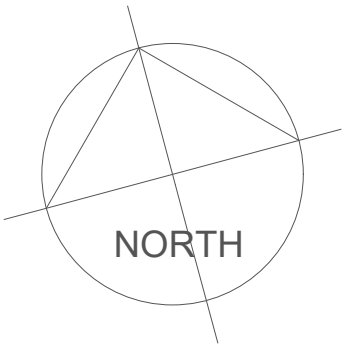
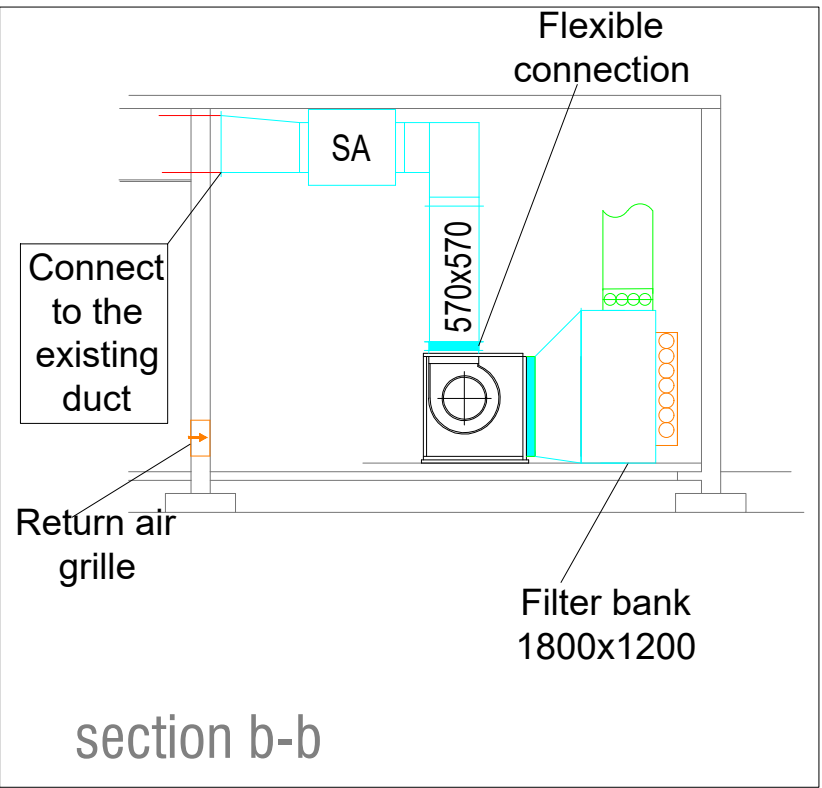
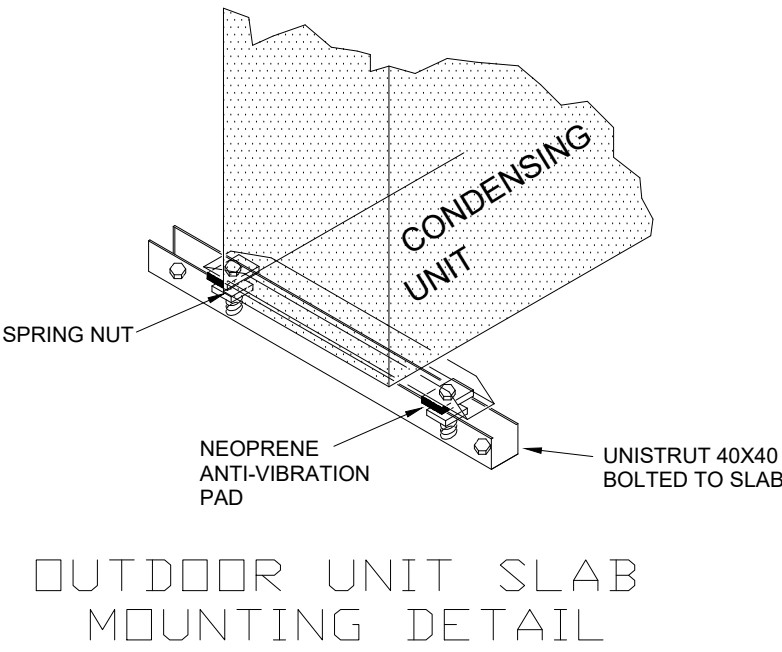
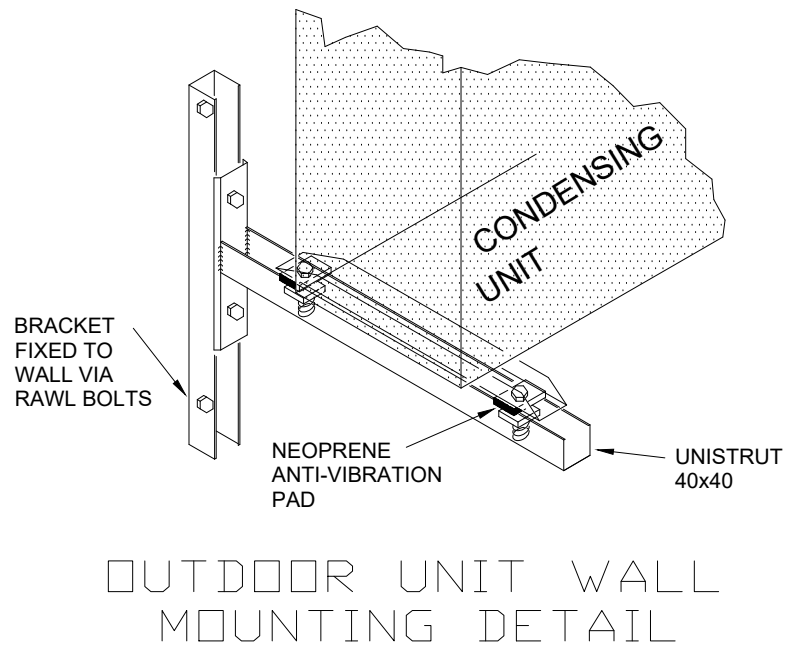




AIR CONDITIONER SCHEDULE (BLOCK B FLOOR G)					
UNIT No.	COOLING LOAD	HEATING LOAD	ALL TERMINATING IN ISOLATOR AT INDOOR UNITS, BY ELECTRICAL CONTRACTOR, CONNECTION TO UNIT BY A/C CONTRACTOR.	TYPE HEATING	QUANTITY
CU-01	2.2 kW	2.5 kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRV Round flow cassette	4
CU-02	2.8 kW	3.2 kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRV Round flow cassette	2
CU-03	3.6 kW	4.0 kW	220-240V / 1 Ph / 0.038 kW / 16A POWER POINT	VRV Round flow cassette	2
CU-05	5.6 kW	6.3 kW	220-240V / 1 Ph / 0.053 kW / 16A POWER POINT	VRV Round flow cassette	2
OD-4	33.5 kW	33.5 kW	380-415V / 3 Ph / 9.43 kW / 25A POWER POINT	VRV heat recovery outdoor unit	1
SU-01	3.5 kW	4.0 kW	220-240V / 1 Ph / 1.14 kW / 10A POWER POINT	Inverter split cassette indoor unit	2
SU-01	3.5 kW	4.0 kW	220-240V / 1 Ph / 1.14 kW / 10A POWER POINT	Inverter split outdoor unit	2
SU-02	7.0 kW	7.0 kW	220-240V / 1 Ph / 2.4 kW / 16A POWER POINT	Inverter split cassette indoor unit	2
SU-02	7.0 kW	7.0 kW	220-240V / 1 Ph / 2.4 kW / 16A POWER POINT	Inverter split outdoor unit	2
AC-01	25.0 kW	26 kW	380-415V / 3 Ph / 8.4 kW / 13.5A POWER POINT	Inverter type split hideaway unit	2
AC-01	25.0 kW	26 kW	380-415V / 3 Ph / 8.4 kW / 13.5A POWER POINT	Inverter type split outdoor unit	2

NOTES

- Contractor(s) are to confirm all dimensions on site prior to commencement of construction and any discrepancies are to be reported to the Mechanical Engineer.
- Ducting to be manufactured in accordance to SMACNA standards.
- All duct penetrations shall be isolated from the wall by means of high-density gloss fibre of at least 25mm thickness.
- Galvanised steel shall be used for all HVAC ducting.
- All ducting shall be provided with mezz flanges.
- All open-end ducts to be capped off with plastic prior to delivery on-site.
- All flexible ducting shall be not more than 1.5m long.
- Refrigerant piping, control and electrical wiring in ceiling void to run on cable trays. Exposed piping and wiring to run in trunking.
- All HVAC equipment to be protected against vibrations by means of anti-vibration mountings.
- All specified equipment must be installed according to the manufacturer's specification.
- All air diffusion equipment to be powder coated according to architect's specified colour.
- To prepare his construction/shop drawings, the HVAC sub-contractor must inspect all the architects drawings including structural and other services design drawings pertaining to the works and shall acquaint himself with the general arrangement of all other services and ensure that in fixing his work it will not obstruct the fixing or future maintenance of other services.
- All electrical installations shall be executed by qualified electrician, and issue COC.
- All duct work shall be sealed, and pressure tested such that air leakages shall be not more than 5% of total airflow. Test results shall be recorded and readily available should they be required before issuing O&M.
- Control panels for AC shall be 1.4m AFFL.



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Legends

W

 WIRED REMOTE CONTROLLER

B

 BMS SYSTEM

SP

 SINGLE PHASE POWER SUPPLY (BY ELECTRICAL CONTRACTOR)

TP

 THREE PHASE POWER SUPPLY (BY ELECTRICAL CONTRACTOR)

D

 DRAIN POINT (BY CIVIL CONTRACTOR)

CD

 CONDENSATE DRAIN PIPING

RP

 REFRIGERANT PIPING

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REPUBLIC OF SOUTH AFRICA

discipline

MECHANICAL

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HVAC

BLOEMFONTEIN HIGH COURT

WCS number

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drawing title

BLOCK B GROUND FLOOR

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MM. MATJOI

scale

NTS

drawn

MM. MATJOI

date

MAY 2020

checked

M. TLADI

drawing number

ME304137