



arts & culture

Department:
Arts and Culture
REPUBLIC OF SOUTH AFRICA



RISIMATI CONSULTING ENGINEERS

PROCUREMENT DOCUMENT

CONTRACT No.: VSB-1160-A

**TITLE: COMPLETION OF DR. JL DUBE MEMORIAL PROJECT,
INANDA, ETHEKWINI LOCAL MUNICIPALITY, KWAZULU
NATAL PROVINCE**

Issued by:

Risimati Consulting Engineers

Date of Issue: 31 August 2020

NAME OF TENDERER:

Data Tables

Contract Details

Contract Number	VSB-1160-A
Contract Title1	Completion of DR. JL Dube Memorial Project, Inanda, EtheKwini Local Municipality, KwaZulu Natal Province
Date of Issue	31 August 2020
Estimated CIDB Grading	6GB, 3SL and 2CE
CIDB Class of Construction	CE, SL and GB
Tender Charge	R 0.00

Employer

Employer's Name	Risimati Consulting Engineers (Pty) Ltd
Department Name	Risimati Projects
(1.1.1.15) Employer	Risimati Consulting Engineers (Pty) Ltd
Physical Address (1.2.1.2)	750 Blouhaak Street, Moreleta Park, 0044
Postal Address (1.2.1.2)	P O Box 40092, Moreleta Park, 0044
Tel (1.2.1.2)	012-998-1054 (t)
Fax (1.2.1.2)	012-998-0536 (f)
E-Mail (1.2.1.2)	projects@risimati.co.za
(1.1.1.16) Employer's Agent	Risimati Consulting Engineers
Physical Address (1.2.1.2)	750 Blouhaak Street, Moreleta Park, 0044
Postal Address (1.2.1.2)	P O Box 40092, Moreleta Park, 0044
Tel (1.2.1.2)	012-998-1054 (t)
Fax (1.2.1.2)	012-998-0536 (f)
E-Mail (1.2.1.2)	projects@risimati.co.za
(1.1.1.17) Employer's Agent's Representative	Bheki Maseko
Tel (1.2.1.2)	012 998 1054
E-Mail (1.2.1.2)	projects@risimati.co.za

Clarification Meeting

Type	The Compulsory site inspection meeting will be held on the 4th of September 2020 at 11:00am on Site No. 151 Langalibalele street, Inanda KZN
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Tender Collection / Delivery

Collection place	Online
Website	www.risimati.co.za
Delivery Place	Ground Floor Municipality building, 166 K.E Masinga Road Durban 4001
Delivery Date	Friday, 11 September 2020
Delivery Time	11:00

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PART T1: TENDERING PROCEDURES
T1.1: TENDER NOTICE AND INVITATION TO TENDER

Tenders are hereby invited for the works to **complete the construction of JL Dube Memorial Project Amphitheatre in Inanda Township, eThekweni Local Municipality, KwaZulu Natal.**

(F.1.1.1) The Employer is the Risimati Consulting Engineers

It is estimated that tenderers should have a CIDB contractor grading designation of **6GB PE 3SL and 2CE PE**(or higher).

(F.1.2) Tenders must be submitted on official tender documentation issued (either in hard copy or in electronic format) by the eThekweni Municipality. Electronically downloaded documentation, obtainable from the **Risimati Consulting Engineers website**, www.risimati.co.za should be printed in its entirety, and suitably bound by the tenderer.

(F.2.7) 151 Langalibalele Street, Inanda, Ethekewini Municipality KZN

(F.2.8) Queries relating to these documents may be addressed to the Employer's representative - Bheki Maseko by email on projects@risimati.co.za

(F.2.13) Tender offers shall be delivered to Ground Floor Municipality building, 166 K.E Masinga Road Durban 4001 and placed in the tender box located in the ground floor foyer.

(F.2.15) Tender offers shall be delivered on or before **Friday**, at or before **11:00** where they will be opened in public.

PART T1: TENDERING PROCEDURES**T1.2: TENDER DATA****T1.2.1 STANDARD CONDITIONS OF TENDER**

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement (July 2015) as published in Government Gazette No 38960, Board Notice 136 of 2015 of 10 July 2015.

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

T1.2.2 TENDER DATA

Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

F.1: GENERAL

F.1.1 The employer: The Employer for this Contract is the Risimati Consulting Engineers.

F.1.2 Tender documents: The Tender Documents issued by the Employer comprise:

- 1) This procurement documents.
- 2) Drawings; issued separately from this document (or alternately: Bound in Section C3.4 as an Annexure).
- 3) "Joint Building Contracts Committee (JBCC) – Principal Building Agreement Edition 6.2 – May 2018.
- 4) In addition, Tenderers are advised, in their own interest, to obtain their own copies of the following acts, regulations, and standards referred to in this document as they are essential for the Tenderer to get acquainted with the basics of construction management, the implementation of preferential construction procurement policies, and the participation of targeted enterprise and labour.
 - The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014).
 - The Construction Industry Development Board Act No 38 of 2000 and the Regulations issued in terms of the Act (July 2013).
 - The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (January 2017).
 - SANS 1921:2004 – Construction and Management Requirements for Works Contract, Parts 1-3.

The Tender Documents issued by the Employer comprise the documents as per the INDEX of this Tender Document.

Tenders must be submitted on official tender documentation issued in electronic format by the Risimati Consulting Engineers

- Electronically downloaded documentation is obtainable from the Risimati Consulting Engineers website. The entire document should be printed and suitably bound by the tenderer.

F.1.4 The employer's agent: The Employer's agent is

- Risimati Consulting Engineers
- Tel: 012 998 1054
- Email: projects@risimati.co.za

F.1.6 Procurement procedures: Option 2 of the proposal procedure using the two-stage system shall be applied.**F.2: TENDERER'S OBLIGATIONS****F.2.1 Eligibility:** A Tenderer will not be eligible to submit a tender if:

- (a) the Tenderer does not comply with the legal requirements as stated in the Employer's current SCM Policy;
- (b) the Tenderer cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.
- (c) the Tenderer fails to attend any Compulsory Clarification Meeting.
- (d) in the event of a Compulsory Clarification Meeting, the Tenderer fails to have form "Certificate of Attendance at Clarification Meeting / Site Inspection" (in Part T2.2) signed by the Employer's Agent or his representative.
- (e) in the case of JV submissions, two or more JV entities have common directors / shareholders or common entities tendering for the same works.
- (f) at the time of closing of tenders, the Tenderer is not registered on the National Treasury Central Supplier Database (CSD) as a service provider. In the case of a Joint Venture, this requirement will apply individually to each party in the Joint Venture.

F.2.1.1 Eligibility: Only those tenderers who are registered (as "Active") with the CIDB (at time of tender closing), in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a GB and CEclass of construction work, are eligible to have their tenders evaluated.**F.2.2.2 The cost of the tender documents:**

"Documents may be obtained, free of charge, in electronic format, from the Risimati Consulting Engineers website (www.risimati.co.za). Electronically downloaded documentation should be printed and suitably bound by the tenderer.

F.2.6 Acknowledge addenda:

"Addenda will be published, in electronic format, on the Risimati Consulting Engineers website (see F.2.2.2 above). Tenderers are to ensure that the Risimati website is consulted for any published addenda pertaining to this tender until three days before the tender closing time as stated in the Tender Data."

"Acknowledgement of receipt of the addenda will be by the return of the relevant completed, dated and signed portion of the addenda, to the address / fax number / email address as specified on the addenda. Failure of the tenderer to comply with the requirements of the addenda may result in the tender submission being made non-responsive."

F.2.7 Clarification meeting: Compulsory Tender Clarification will be conducted on the 04 September 2020 on Site 151 Langalibalele Street, Inanda, Ethekwini Municipality KZN

In the event of a Compulsory Clarification Meeting, Tenderers must sign the attendance register in the name of the tendering entity. Addenda will be issued to, and tenders will be received only from, those tendering entities appearing on the attendance list.

F.2.12 Alternative tender offers: No alternative tender offers will be considered.

F.2.13 Submitting a tender offer: The Employer's address for delivery of tender offers is Ground Floor Municipality building, 166 K.E Masinga Road Durban 4001 and placed in the tender box located in the ground floor foyer.

Telephonic, telegraphic, telex, facsimile or e-mailed tender offers **will not** be accepted.

F.2.14 Closing time: The closing time for delivery of tender offers is:

- Date : Friday,
- Time : 11:00 am

F.2.15 Tender offer validity: The Tender Offer validity period is 12 weeks (90 Days) from the closing time for submission of tenders.

F.2.16 Submit securities, bonds, policies: The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part T2.2 of this procurement document.

F.2.17 Certificates: Refer to Part T2.1 for a listing of certificates that must be provided with the tender. All certificates must be valid at the time of tender closing.

CIDB Registration

Tenderers are to include with their submission a printout of their registration with the CIDB, obtained from the CIDB website (<https://registers.cidb.org.za/PublicContractors/ContractorSearch>).

The Joint Venture Grading Designation Calculator should be used when submitting as a Joint Venture (<https://registers.cidb.org.za/PublicContractors/JVGradingDesignationCalc>).

The date of obtaining the above printouts is to be indicated on the printout. Registration with the CIDB must be reflected as "Active" at time of tender closing.

Tax Clearance

SARS has introduced a new Tax Compliance Status System. Tenderers can submit a Tax Compliance Status PIN (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status.

Separate Tax Clearance Certificates / TCS PINs are required for each entity in a Joint Venture.

B-BBEE Status Level of Contribution

The Amended Construction Sector Code (Government Gazette No.41287) is applicable to the B-BBEE compliance measurement of all entities that fall within the Construction Sector.

The requirements for measurement and verification of entities are contained in the "Amended Code Series CSC000: Framework for Measuring Broad Based Black Economic Empowerment in the Construction Sector", as published in Notice 931 of 2017, Government Gazette No.41287 of 01/12/2017.

The requirements are summarised in the following table:

Enterprise Type	Total Annual Revenue (R million)	Ownership and Annual Turnover
EME: Built Environment Professional	< R1.8m	May present an affidavit OR a certificate issued by the CIPC OR authorised B-BBEE verification certificate (as below)
EME: Contractor	< R3.0m	
Reference should be made to Cl.3.6.2.4.1 of the Amended Construction Sector Code regarding the above exceptions.		
EME: Built Environment Professional	< R6m	Must present an authorised B-BBEE verification certificate by a SANAS accredited Verification Agency
EME: Contractor	< R10m	
QSE: Built Environment Professional	≥ R6.0m and < R25m	
QSE: Contractor	≥ R10.0m and < R50m	
Large Enterprise	>R50m	

The requirements for measurement of Joint Ventures is described in Cl.2.8 of the Amended Construction Sector Code. The compilation of a consolidated verification certificate is required.

Central Supplier Database (CSD)

The entities (full) Registration Report, obtained from the National Treasury Central Supplier Database, is to be included in the tender submission (<https://secure.csd.gov.za>).

Separate CSD Registration Reports are required for each entity in a Joint Venture.

F.3: THE EMPLOYER'S UNDERTAKINGS

F.3.1 Respond to requests from the tenderer:

F.3.2 Issue addenda: Add the following paragraph: "Addenda will be published, in electronic format, on the Risimati Consulting Engineers website (www.risimati.co.za). In the event that the Clarification Meeting is compulsory, Addenda will only be issued to those tendering entities appearing on the Clarification Meeting Register."

F.3.4 Opening of Tender Submissions: Tenders will be opened immediately after the closing time for tenders. The public reading of tenders will take place in the SCM Boardroom, 6th Floor, Engineering Unit Building, 166 KE Masinga Road, Durban.

F.3.5 Evaluation of Tender Offers: The procedure for evaluation of responsive Tender Offers will be in accordance with the Employer's current SCM Policy, the Preferential Procurement Policy Framework Act (5 of 2000), and the Preferential Procurement Policy Framework Act Regulations (January 2017).

The financial offer will be reduced to a comparative basis using the Tender Assessment Schedule.

The procedure for the evaluation of responsive tenders is **Method 2** (Price and Preference with functionality).

The **80/20** preference points system will be used where the financial value (incl. VAT) of one or more responsive tender offers have a value that equals or is less than R 50,000,000. The Formula used to calculate the **Price Points**, and the **Preference Points** that will be allocated, will be according to the specified PPPFA Regulations.

F.3.5.1 The value of W_2 is 100. The Functionality criteria (and sub-criteria if applicable) and maximum score in respect of each of the criteria are as follows:

Functionality Criteria / Sub Criteria		Maximum Points Score
Tenderer's Experience		45
Project Organogram and Experience of Key Staff	Site agent	5
	Foremen	5
Preliminary Programme		10
Construction Methodology		25
Quality Control		5
Health & Safety		5
Maximum possible score for Functionality (M_s)		100

Functionality Criteria / Sub Criteria		Maximum Points Score
Tenderer's Experience		45
Project Organogram and Experience of Key Staff	Contracts Manager	6
	Site agent	2
	Foremen	2
Preliminary Programme		10
Construction Methodology		25
Quality Control		5
Health & Safety		5
Maximum possible score for Functionality (M_s)		100

The minimum number of evaluation points for Functionality is **60**. Only those tenderers who achieve the minimum number of Functionality evaluation points (or greater) will be eligible to have their tenders further evaluated.

Each evaluation criteria will be assessed in terms of six indicators and scores allocated according to the following table:

Level 0	Level 1	Level 2	Level 3	Level 4	Level 5
0	20	40	60	80	100

Evaluation criteria will be adjudicated according to submissions made in accordance with the following schedules, which are found in Part T2.2: Returnable Schedules:

Functionality criteria / Subcriteria	Returnable Schedules
Tenderer's Experience	Experience of Tenderer
Project Organogram and Experience of Key Staff	- Proposed Organisation and Staffing - Key Personnel - Experience of Key Personnel
Preliminary Programme	Preliminary Programme
Construction Methodology	- Construction Approach, Methodology, - Schedule of Proposed Subcontractors - Plant and Equipment
Quality Control	Quality Control Statement
Health & Safety	- Contractor's Health and Safety Plan - Contractor's Health and Safety Declaration

Unless otherwise stated, evaluation criteria will be adjudicated with respect to the contract specific Scope of Work, as specified in Part C.3. In this regard the following definitions apply to the evaluation criteria prompts for judgement:

- **“successfully completed”** implies a project has been completed on time and to specification;
- **“similar nature”** implies projects that were of a value of at least 70% of this tender's value, and had a comparable Scope of Work in terms of technical requirements and operations;
- **“experience”** implies experience on projects of a similar nature;
- **“accredited degree / diploma”** implies a minimum 3-year qualification within the built environment, from a registered University or Institute of Technology.

Criterion: Tenderer's Experience	
Level 0	No information provided; OR submission of no substance / irrelevant information provided
Level 1	To have successfully completed <u>1 project</u> of a similar nature within the past 5 years.
Level 2	To have successfully completed <u>2 to 3 projects</u> of a similar nature within the past 5 years.
Level 3	To have successfully completed <u>4 to 10 projects</u> of a similar nature within the past 5 years.
Level 4	To have successfully completed <u>11 to 15 projects</u> of a similar nature within the past 5 years.
Level 5	To have successfully completed <u>15+ projects</u> of a similar nature within the past 5 years.

Criterion: Project Organogram and Experience of Key Staff		
Note: “similar nature” implies projects of a similar nature with respect to the Scope		
	SITE AGENT	FOREMAN
Level 0	No information provided OR submission of no substance / irrelevant information OR less than 1 year's relevant experience on projects of a similar nature.	No information provided OR submission of no substance / irrelevant information OR less than 1 year's relevant experience on projects of a similar nature.
Level 1	Minimum 1 year relevant experience including experience on projects of a similar nature.	Minimum 1 year relevant experience including experience on projects of a similar nature.
Level 2	Minimum 2 years relevant experience including experience on projects of a similar nature.	Minimum 2 years relevant experience including experience on projects of a similar nature.
Level 3	Minimum 3 years relevant experience including experience on projects of a similar nature.	Minimum 3 years relevant experience including experience on projects of a similar nature.
Level 4	Minimum 5 years or more relevant experience including experience on projects of a similar nature.	Minimum 5 years or more relevant experience including experience on projects of a similar nature.
Level 5	Minimum 10 years relevant experience including experience on projects of a similar nature.	Minimum 10 years relevant experience including experience on projects of a similar nature.

Criterion: Project Organogram and Experience of Key Staff			
	CONTRACTS MANAGER	SITE AGENT	FOREMAN
Level 0	No information provided OR submission of no substance / irrelevant information provided OR less than 2 year's experience OR Relevant accredited diploma / degree and less than 1 year's experience.	No information provided OR submission of no substance / irrelevant information provided OR less than 2 year's experience. OR Relevant accredited diploma / degree and less than 1 year's experience.	No information provided OR submission of no substance / irrelevant information OR Less than 2 year's experience.
Level 1	Minimum 2 year's experience OR Relevant accredited diploma / degree and minimum 1 year's experience.	Minimum 2 year's experience OR Relevant accredited diploma / degree and minimum 1 year's experience.	Minimum 2 year's experience.
Level 2	Minimum 3 year's experience OR Relevant accredited diploma / degree and minimum 2 year's experience.	Minimum 3 year's experience OR Relevant accredited diploma / degree and minimum 2 year's experience.	Minimum 3 year's experience.
Level 3	Minimum 5 year's experience OR Relevant accredited diploma / degree and minimum 4 year's experience.	Minimum 5 year's experience OR Relevant accredited diploma / degree and minimum 4 year's experience.	Minimum 5 year's experience.
Level 4	Minimum 8 year's experience OR Relevant accredited diploma / degree and minimum 7 year's experience.	Minimum 8 year's experience OR Relevant accredited diploma / degree and minimum 7 year's experience.	Minimum 8 year's experience.
Level 5	Minimum 10 year's experience OR Relevant accredited diploma / degree and minimum 9 year's experience.	Minimum 10 year's experience OR Relevant accredited diploma / degree and minimum 9 year's experience.	Minimum 10 year's experience.

Criterion: Preliminary Programme	
Level 0	No information provided OR submission of no substance / irrelevant information provided
Level 1	Programme <u>does not cover</u> all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and not in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion).
Level 2	Programme <u>covering</u> all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion).
Level 3	Programme <u>covering</u> all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion). Plus: Shows critical path with logical linking of tasks/activities
Level 4	Programme <u>covering</u> all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion). Plus: - Shows critical path with logical linking of tasks/activities, and - Detailed activity and resources breakdown. - Cashflow included
Level 5	Programme <u>covering</u> all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion). Plus: - Shows critical path with logical linking of tasks/activities, and - Detailed activity and resources breakdown. - Cashflow included - Detailed Plant and equipment resource breakdown

Criterion: Construction Methodology	
Level 0	No information provided OR submission of no substance / irrelevant information provided
Level 1	Brief overview of a <u>generic</u> methodology which encompasses all programmed activities in appropriate order.
Level 2	Brief overview of a <u>site specific</u> methodology which encompasses all programmed activities in appropriate and logical order.
Level 3	Brief overview of a <u>site specific</u> methodology which encompasses all programmed activities in appropriate order; Plus: - Including staff, plant and equipment resources - Including subcontractors if applicable
Level 4	Brief overview of <u>site specific</u> methodology which encompasses all programmed activities in appropriate order; Plus: - Including staff, plant and equipment resources, - Including subcontractors if applicable, - A brief description of preparatory work, construction processes including finishing works for each activity.
Level 5	Brief overview of <u>site specific</u> methodology which encompasses all programmed activities in appropriate order; Plus: - Including staff, plant and equipment resources, - Including subcontractors if applicable, - A brief description of preparatory work, construction processes including finishing works for each activity. - Demonstrates how the important issues are approached in an innovative and efficient way, indicating that the tenderer has excellent knowledge of working in the projects environment and producing the required final product.

Criterion: Quality Control	
Level 0	No information provided OR submission of no substance / irrelevant information provided
Level 1	<u>A generic statement</u> covering required sampling and testing requirements for preparatory works, process monitoring and finishing works, for all programmed activities.
Level 2	<u>Activity/Site specific statement</u> covering required sampling and testing requirements for preparatory works, process monitoring and finishing works, for all programmed activities.
Level 3	<u>Activity/Site specific statement</u> covering required sampling and testing requirements for preparatory works, process monitoring and finishing works, for all programmed activities; Plus: • Including site specific quality control check-sheet for programmed activities.
Level 4	<u>Activity/Site specific statement</u> covering required sampling and testing requirements for preparatory works, process monitoring and finishing works, for all programmed activities; Plus: • Including site specific quality control check-sheet for programmed activities; • Resources to be assigned to quality control; • List of subcontractor /service providers to be assigned for quality control; • Statement on remedial action to quality control.
Level 5	<u>Activity/Site specific statement</u> covering required sampling and testing requirements for preparatory works, process monitoring and finishing works, for all programmed activities; Plus: • Including site specific quality control check-sheet for programmed activities; • Resources to be assigned to quality control; • List of subcontractor /service providers to be assigned for quality control; • Statement on remedial action to quality control. • ISO Accreditation

Criterion: Health & Safety	
Level 0	No information provided OR submission of no substance / irrelevant information provided
Level 1	<u>Generic statement</u> on health and safety
Level 2	<u>Site specific statement with the inclusion of a qualified Health and Safety Officer having greater than 3 year's experience (on part time bases)</u> , providing a brief description for at least the following: - A proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 9 to 30; - Pro-active identification of potential hazards and unsafe working conditions; - Provision of a safe working environment and equipment; - Statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (Regulation 7); - Monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided.
Level 3	<u>Site specific statement with the inclusion of a qualified Health and Safety Officer having greater than 5 year's experience (on part time bases)</u> , providing a brief description for at least the following: - A proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 9 to 30; - Pro-active identification of potential hazards and unsafe working conditions; - Provision of a safe working environment and equipment; - Statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (Regulation 7); - Monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided.
Level 4	<u>Site specific statement with the inclusion of a qualified Health and Safety Officer having greater than 5 year's experience (on full time bases)</u> , providing a brief description for at least the following: - A proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 9 to 30; - Pro-active identification of potential hazards and unsafe working conditions; - Provision of a safe working environment and equipment; - Statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (Regulation 7); - Monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided.
Level 5	As Level 4 except that the qualified Health and Safety Officer <u>has greater than 10 years experience (on a full time bases)</u> .

- F.3.6 Acceptance of tender offer:** In addition to the requirements of Clause F.3.5 of the Standard Conditions of Tender, tender offers will only be accepted if:
- (a) The tenderer submits an original valid Tax Clearance Certificate issued by the South African Revenue Services or has made arrangements to meet outstanding tax obligations;
 - (b) The tenderer is registered, and “Active”, with the Construction Industry Development Board, at time of tender closing, in an appropriate contractor grading designation;
 - (c) The tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
 - (d) The tenderer has not:
 - Abused the Employer’s Supply Chain Management System; or
 - Failed to perform on any previous contract and has been given a written notice to this effect;
 - (e) The tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer’s ability to perform the contract in the best interests of the employer or potentially compromise the tender process;
 - (f) The tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer;
 - (g) The employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely.
- F.3.15 Complete adjudicator’s contract:** Refer to the Joint Building Contracts Committee (JBCC) – Principal Building Agreement Edition 6.2 – May 2018 and the Contract Data.
- F.3.17 Copies of contract:** The number of paper copies of the signed contract to be provided by the Employer is ONE (1).

The additional conditions of tender are:**ACT.1 Appeals**

Any persons aggrieved by decisions or actions taken by Risimati Consulting Engineers, may lodge an appeal within 14 days of the decision or action, in writing to Risimati Consulting Engineers. All appeals (clearly setting out the reasons for the appeal) and queries with regard to the decision of award are to be directed to:

Risimati Consulting Engineers
Attention Mr V Kekana email: admin@risimati.co.za
P O Box 40092
Moreleta Park 0044

ACT.2 Prohibition on awards to persons in the service of the state

Risimati Consulting Engineers may not make any award to a person:

- (a) Who is in the service of the State;
- (b) Who is full time employee of Risimati Consulting Engineers
- (c) If that person is not a natural person, of which a director, manager, principal shareholder or stakeholder is a person in the service of the state; or
- (d) Who is an advisor or consultant contracted with Risimati Consulting Engineers the national department of Sports, Arts & Culture, the municipality or a municipal entity.

Should a contract be awarded, and it is subsequently established that Clause 44 has been breached, the Employer shall have the right to terminate the contract with immediate effect.

ACT.3 Code of Conduct and Local Labour

The Tenderers shall make themselves familiar with the requirements of the following policies that are available on web address: <ftp://ftp.durban.gov.za/cesu/StdContractDocs/>:

- Code of Conduct;
- The Use of CLOs and Local Labour.

ACT.4 Pre-qualification criteria for preferential procurement

If an organ of state decides to apply pre-qualifying criteria to advance certain designated groups, that organ of state must advertise the tender with a specific tendering condition that only one or more of the following tenderers may respond:

- (a) a tenderer having a stipulated minimum B-BBEE status level of contributor;
- (b) an EME or QSE;
- (c) a tenderer subcontracting a minimum of 30% to:
 - (i) an EME or QSE which is at least 51% owned by black people;
 - (ii) an EME or QSE which is at least 51% owned by black people who are youth;
 - (iii) an EME or QSE which is at least 51% owned by black people who are women;
 - (iv) an EME or QSE which is at least 51% owned by black people with disabilities;
 - (v) an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships;
 - (vi) a cooperative which is at least 51% owned by black people;
 - (vii) an EME or QSE which is at least 51% owned by black people who are military veterans;
 - (viii) an EME or QSE.

A tender that fails to meet any pre-qualifying criteria stipulated in the tender documents is an unacceptable tender.

ACT.5 Subcontracting as Condition of Tender

For contracts above R30m, the 2017 PPPFA Regulations require organs of State to identify tenders, where it is feasible, to subcontract a minimum of 30% of the value of the contract to the following designated groups:

- (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 51% owned by black people living in rural or underdeveloped areas or townships;
- (g) a cooperative 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; or
- (i) more than one of the categories referred to in paragraphs (a) to (h).

In addition to the above, the eThekweni Municipal Council has adopted a framework for empowerment strategies for contracts between R5m and R30m.

PART T2: RETURNABLE DOCUMENTS
T2.1: LIST OF RETURNABLE DOCUMENTS

T2.1.1 General

The Tender Document must be submitted as a whole. All forms must be properly completed as required, and the document shall not be taken apart or altered in any way whatsoever.

The Tenderer is required to complete each and every Schedule and Form listed below to the best of his ability as the evaluation of tenders and the eventual contract will be based on the information provided by the Tenderer. Failure of a Tenderer to complete the Schedules and Forms to the satisfaction of the Employer will inevitably prejudice the tender and may lead to rejection on the grounds that the tender is not responsive.

T2.1.2 Returnable Schedules, Forms and Certificates

Company Specific

Certificate of Attendance at Clarification Meeting	17
Certificate of Authority	18
Declaration of Municipal Fees	19
Compulsory Enterprise Questionnaire	20
Tax Compliance Status PIN / Tax Clearance Certificate	22
B-BBEE Status Level of Contribution	23
Verification of CIDB Registration and Status	24
CSD Registration Report	25

Consolidated MBD Documents

MBD2: Tax Clearance Certificate Requirements	26
MBD4: Declaration of Interest	
MBD5: Declaration for Procurement Above R10 Million (if applicable)	
MBD6.1: Preference Points Claim Form ITO the Preferential Regulations	
MBD6.2: Declaration Certificate for Local Production and Content (if applicable)	
MBD8: Declaration of Bidder's Past SCM Practices	
MBD9: Certificate of Independent Bid Determination	

Technical and Evaluation

Experience of Tenderer	34
Proposed Organisation and Staffing	35
Key Personnel	36
Experience of Key Personnel	37
Preliminary Programme	38
Construction Approach, Methodology, and Quality Control	39
Schedule of Proposed Subcontractors	40
Plant and Equipment	41
Contractor's Health and Safety Plan	42
Contractor's Health and Safety Declaration	43

Contractual

Joint Venture Agreements (if applicable)	45
Record of Addenda to Tender Documents	46
Amendments, Qualifications and Alternatives	47
Form of Offer	48
Bill of Quantities	55

T2.2: RETURNABLE SCHEDULES, FORMS, AND CERTIFICATES

The returnable schedules, forms, and certificates as listed in T2.1.2 can be found on the pages 17 to 47.

CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING / SITE INSPECTION

This is to certify that:

(tenderer name)

of (address)

.....

was represented by the person(s) named below at the Clarification Meeting held for all tenderers, the details of which are stated in the Tender Data (F.2.7).

I / We acknowledge that the purpose of the meeting was to acquaint myself / ourselves with the site of the works and / or matters incidental to doing the work specified in the tender documents in order for me / us to take account of everything necessary when compiling our rates and prices included in the tender.

Particulars of person(s) attending the meeting:

Name:

Name:

Signature:

Signature:

Capacity:

Capacity:

Attendance of the above person(s) at the meeting is confirmed by the Employer's Agent's Representative, namely:

Name:

Signature:

Date:

CERTIFICATE OF AUTHORITY

Indicate the status of the tenderer by ticking the appropriate box hereunder.

COMPANY		CLOSE CORPORATION		PARTNERSHIP		JOINT VENTURE		SOLE PROPRIETOR	
Refer to Notes at the bottom of the page									

I / We, the undersigned, being the Chairperson (Company), Member(s) (Close Corporation), Partners (Partnership), Sole Owner (Sole Proprietor), Lead Partner (JV), in the company / business trading as:

.....

hereby authorise Mr/Mrs/Ms

acting in the capacity of

to sign all documents in connection with the tender for **Contract No.** VSB-1160-A. and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

Notes

The following documents must be attached to the back inside cover to this procurement document:

If a Company : a "Resolution of the Board" in this regard.

If a Joint Venture : a "Power of Attorney" signed by the legally authorised signatories of all the partners to the Joint venture.

I, the undersigned, do hereby declare that the Municipal fees of

The following account details relate to property of the said TENDERER:

Account Number: to be completed by tenderer.

[illegible][illegible][illegible][illegible][illegible][illegible][illegible]

- Where the TENDERER'S place of business or business interests are outside the jurisdiction of eThekweni municipality, a copy of the accounts/agreements from the relevant municipality must be attached (to the back inside cover of this document).
- Where the tenderer's Municipal Accounts are part of their lease agreement, then a copy of the agreement, or official letter to that effect is to be attached (to the back inside cover of this document).

(Block Capitals)

DATE:

COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture, a separate questionnaire in respect of each partner must be completed and submitted.

- 1) **Name of enterprise:**
- 2) **VAT registration number, if any:**
- 3) **CIDB registration number, if any:**
- 4) **Particulars of sole proprietors and partners in partnerships**

Full Name	Identity number*	Personal income tax number *

* Complete only if a sole proprietor or partnership and attach separate page if more than 3 partners

- 5) **Particulars of companies and close corporations**

Company registration number, if applicable:

Close corporation number, if applicable:

Tax Reference number, if any:

- 6) **Record in the service of the state**

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

- | | |
|--|---|
| ☐ a member of any municipal council | ☐ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| ☐ a member of any provincial legislature | ☐ a member of an accounting authority of any national or provincial public entity |
| ☐ a member of the National Assembly or the National Council of Province | ☐ an employee of Parliament or a provincial legislature |
| ☐ a member of the board of directors of any municipal entity | |
| ☐ an official of any municipality or municipal entity | |

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

Insert separate page if necessary

7) Record of spouses, children and parents in the service of the state

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

- | | |
|--|---|
| ☐ a member of any municipal council | ☐ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| ☐ a member of any provincial legislature | ☐ a member of an accounting authority of any national or provincial public entity |
| ☐ a member of the National Assembly or the National Council of Province | ☐ an employee of Parliament or a provincial legislature |
| ☐ a member of the board of directors of any municipal entity | |
| ☐ an official of any municipality or municipal entity | |

Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

Insert separate page if necessary

The undersigned, who warrant that he/she is duly authorised to do so on behalf of the enterprise:

- i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my/our tax matters are in order;
- ii) confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercise, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- iii) confirms that no partner, member, director or other person, who wholly or partly exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- iv) confirms that I/we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed Date

Name Position

Enterprise Name

TAX COMPLIANCE STATUS PIN / TAX CLEARANCE CERTIFICATE

Reference is made to F.2.23 of the Conditions of Tender.

SARS has introduced a new Tax Compliance Status System. Tenderers can submit a Tax Compliance Status PIN (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status.

Separate Tax Clearance Certificates / TCS PINs are required for each entity in a Joint Venture.

Tenderers are to attach to this page a printout of their Tax Compliance Status PIN (TCS PIN) OR an original Tax Clearance Certificate.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

B-BBEE STATUS LEVEL OF CONTRIBUTION

Reference is made to F.2.23 of the Conditions of Tender.

The Amended Construction Sector Code (Government Gazette No.41287) is applicable to the B-BBEE compliance measurement of all entities that fall within the Construction Sector.

The requirements for measurement and verification of entities are contained in the "Amended Code Series CSC000: Framework for Measuring Broad Based Black Economic Empowerment in the Construction Sector", as published in Notice 931 of 2017, Government Gazette No.41287 of 01/12/2017.

The requirements are summarised in the following table:

Enterprise Type	Total Annual Revenue (R million)	Ownership and Annual Turnover
EME: Built Environment Professional	< R1.8m	May present an affidavit OR a certificate issued by the CIPC OR
EME: Contractor	< R3.0m	authorised B-BBEE verification certificate (as below)
Reference should be made to Cl.3.6.2.4.1 of the Amended Construction Sector Code regarding the above exceptions.		
EME: Built Environment Professional	< R6m	Must present an authorised B-BBEE verification certificate by a SANAS accredited Verification Agency
EME: Contractor	< R10m	
QSE: Built Environment Professional	≥ R6.0m and < R25m	
QSE: Contractor	≥ R10.0m and < R50m	
Large Enterprise	>R50m	

The requirements for measurement of Joint Ventures is described in Cl.2.8 of the Amended Construction Sector Code. The compilation of a consolidated verification certificate is required.

Tenderers are to attach to this page an affidavit, a certificate issued by the CIPC, or an authorised B-BBEE verification certificate by a SANAS accredited Verification Agency.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

VERIFICATION OF CIDB REGISTRATION AND STATUS

Reference is made to F.2.23 of the Conditions of Tender.

Clause F.2.1.1 of the Conditions of Tender – “Eligibility”, requires a tenderer to be registered, as “Active”, with the CIDB (at time of tender closing), in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a CE class of construction work.

Tenderers are to attach to this page a printout of their registration with the CIDB, as obtained from the CIDB website <https://registers.cidb.org.za/PublicContractors/ContractorSearch>. The date of obtaining the printout is to be indicated on the printout.

The following is an example of a printout obtained from the above website.

Home

Contractor Detail Print

Contractor Detail

CRS Number: _____ Type of Enterprise: _____

Contractor Name: _____ Registration Date: _____

Trading Name: _____ Expiry Date: _____

Status: _____

Contractor Grades

Grade: _____

Back

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[Website technical enquires contact](#)

01/01/2017

NAME : (Block Capitals)

SIGNATURE : DATE:
 (of person authorised to sign on behalf of the Tenderer)

CSD REGISTRATION REPORT

Reference is made to F.2.23 of the Conditions of Tender.

Clause F.2.1 of the Conditions of Tender – “Eligibility”, requires a tenderer to be registered at the time of tender closing on the National Treasury Central Supplier Database (CSD) as a service provider.

Tenderers are to attach to this page a printout of their CSD Registration Report, as obtained from the National Treasury’s CSD website <https://secure.csd.gov.za/Account/Login>. The date of obtaining the printout is to be indicated on the printout.

The following is an example of the beginning of the printout obtained from the above website.

 CENTRAL SUPPLIER DATABASE FOR GOVERNMENT	Report Date:
	Report Ran By:

CSD REGISTRATION REPORT			
-------------------------	--	--	--

SUPPLIER IDENTIFICATION			
Supplier number		Have Bank Account	
Is supplier active?		Total annual turnover	
Supplier type		Financial year start date	
Supplier sub-type		Registration date	
Legal name		Created by	
Trading name		Created date	
Identification type		Edit by	
Government breakdown		Edit date	
Business status		Restricted Supplier	
Country of origin		Restriction Last Verification Date	
South African company/CC registration number			

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

CONSOLIDATED BIDDING DOCUMENTS

The following SECTIONS are required to be completed as part of this procurement document

<u>Section</u>	<u>Description</u>	<u>Required?</u>
A	General Enterprise Information	Yes
B	MBD2: Tax Clearance Certificate Requirements	Yes
C	MBD4: Declaration of Interest	Yes
D	MBD5: Declaration for Procurement Above R10 Million	Yes
E	MBD6.1: Preference Points Claim Form ITO the Preferential Regulations	Yes
F	MBD6.2: Declaration Certificate for Local Production and Content for Designated Sectors.....	Yes
G	MBD8: Declaration of Bidder's Past SCM Practices	Yes
H	MBD9: Certificate of Independent Bid Determination	Yes
I	Confirmations, Authorities, Certifications, Acknowledgements and Signatures	Yes

NOTES

MBD4. MSCM Regulations: **"in the service of the state"** means to be:

- (a) a member of –
 - (i) any municipal council;
 - (ii) any provincial legislature; or
 - (iii) the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal enterprise;
- (c) an official of any municipality or municipal enterprise;
- (d) an employee of any national or provincial department, national or provincial public enterprise or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public enterprise; or
- (f) an employee of Parliament or a provincial legislature.

"Shareholder" means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

MBD9. Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

SECTION A: GENERAL ENTERPRISE INFORMATION

3.0 The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers must be indicated below. In the case of a joint venture, information in respect of each partnering enterprise must be completed and submitted

Page 27

Ref	Description	Complete or Circle Applicable
-----	-------------	-------------------------------

SECTION B: MBD 2: TAX CLEARANCE CERTIFICATE REQUIREMENTS

It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder's tax obligations.

- 1.0 In order to meet this requirement bidders are required to complete the TCC 001: "Application for a Tax Clearance Certificate" form and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
- 2.0 SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
- 3.0 The original Tax Clearance Certificate must be submitted together with the bid (attached to the inside back cover of this procurement document). Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
- 4.0 In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.
- 5.0 Copies of the TCC 001: "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za.
- 6.0 Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za.
- 7.0 Notwithstanding Clauses 1.0 to 6.0 above: Since 18 April 2016, SARS has introduced a new Tax Compliance Status System (TCS). As part of this enhanced system, tenderers can now submit a Tax Compliance Status PIN instead of an original Tax Clearance Certificate (TCC). This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status. This number, if available, is to be entered in Item 2.7 of Section A of these consolidated Municipal Bidding Documents.
For further particulars please contact your nearest SARS branch, or call the SARS Contact Centre on 0800 00 7277, or log onto SARS eFiling.

SECTION C: MBD 4: DECLARATION OF INTEREST

No bid will be accepted from persons "in the service of the state". Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

1.0	Are you presently in the service of the state?	YES	NO
	If yes, furnish particulars:		
2.0	Have you been in the service of the state for the past twelve months?	YES	NO
	If yes, furnish particulars:		
3.0	Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?	YES	NO
	If yes, furnish particulars:		
4.0	Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid?	YES	NO
	If yes, furnish particulars:		
5.0	Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?	YES	NO
	If yes, furnish particulars:		
6.0	Are any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?	YES	NO
	If yes, furnish particulars:		
7.0	Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract ?	YES	NO
	If yes, furnish particulars:		
8.0	The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers are indicated in SECTION A of these Consolidated Municipal Bidding documents .		

Ref	Description	Complete or Circle Applicable	
SECTION D: MBD 5: DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)			
For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire.			
1.0	Are you by law required to prepare annual financial statements for auditing? If YES, you will be required to submit audited annual financial statements (on request during the tender evaluation period) for the past three years or since the date of establishment if established during the past three years.	YES	NO
2.0	Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days? If NO, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days. If YES, provide particulars on a letterhead. (Attach this letter to the back inside cover of this procurement document).	YES	NO
3.0	Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract? If YES, provide particulars on a letterhead. (Attach this letter to the back inside cover of this procurement document).	YES	NO
4.0	Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic? If YES, provide particulars on a letterhead. (Attach this letter to the back inside cover of this procurement document).	YES	NO

SECTION E: MBD 6.1: PREFERENCE POINTS CLAIM ITO THE PREFERENTIAL REGULATIONS								
Preference points for this tender shall be awarded as per the Tender Data and the Preferential Procurement Regulations (January 2017). Failure on the part of a tenderer to submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA) together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed. The Employer reserves the right to require of a tenderer, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the Employer.								
1.0	B-BBEE Status Level of Contribution claimed: Will any portion of the contract be sub-contracted? If YES, indicate: (i) what percentage of the contract will be subcontracted? (ii) the name of the sub-contractor? Name: (iii) the B-BBEE status level of the sub-contractor?	<table border="1"> <tr> <td>YES</td> <td>NO</td> </tr> </table> <table border="1"> <tr> <td colspan="2"></td> </tr> </table> <table border="1"> <tr> <td>YES</td> <td>NO</td> </tr> </table>	YES	NO			YES	NO
YES	NO							
YES	NO							
2.0	(iv) whether the sub-contractor is an EME?	<table border="1"> <tr> <td>YES</td> <td>NO</td> </tr> </table>	YES	NO				
YES	NO							
The undersigned, certify that the B-BBEE status level of contribution indicated in paragraph 1.0 above qualifies the company / firm for preference points and acknowledges that the remedies as per Clause 14 of the Preferential Procurement Regulations (2017) shall apply.								

SECTION F: MBD 6.2: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS	
This Municipal Bidding Document (MBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably). Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017 and the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].	

- 1.0 General Conditions
- 1.1 Preferential Procurement Regulations, 2017 (Regulation 8) makes provision for the promotion of local production and content.
- 1.2 Regulation 8.(1) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3 Where necessary, for bids referred to in paragraph 1.2 above, a two-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4 A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.

Ref	Description	Complete or Circle Applicable								
1.5	The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows: $LC = [1 - x / y] * 100$ Where: x is the imported content in Rand y is the bid price in Rand excluding value added tax (VAT). Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by the South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as required in paragraph 4.1 below. The SABS approved technical specification number SATS 1286:2011 is accessible on http://www.thedti.gov.za/industrial development/ip.jsp at no cost.									
1.6	A bid may be disqualified if – (a) this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation; and (b) the bidder fails to declare that the Local Content Declaration Templates (Annex C, D and E) have been audited and certified as correct.									
2.0	Definitions									
2.1	“bid” includes written price quotations, advertised competitive bids or proposals;									
2.2	“bid price” price offered by the bidder, excluding value added tax (VAT);									
2.3	“contract” means the agreement that results from the acceptance of a bid by an organ of state;									
2.4	“designated sector” means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;									
2.5	“duly sign” means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility (close corporation, partnership or individual).									
2.6	“imported content” means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour and intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;									
2.7	“local content” means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;									
2.8	“stipulated minimum threshold” means that portion of local production and content as determined by the Department of Trade and Industry; and									
2.9	“sub-contract” means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.									
3.0	The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows: <table border="1"> <thead> <tr> <th>Description of services, works or goods</th> <th>Stipulated minimum threshold</th> </tr> </thead> <tbody> <tr> <td>.....</td> <td>..... %</td> </tr> <tr> <td>.....</td> <td>..... %</td> </tr> <tr> <td>.....</td> <td>..... %</td> </tr> </tbody> </table>	Description of services, works or goods	Stipulated minimum threshold		 %		 %		 %	
Description of services, works or goods	Stipulated minimum threshold									
.....	 %									
.....	 %									
.....	 %									
4.0	Does any portion of the services, works or goods offered have any imported content?	<table border="1"> <tr> <td>YES</td> <td>NO</td> </tr> </table>	YES	NO						
YES	NO									
4.1	If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by the SARB for the specific currency at 12:00 on the date of advertisement of the bid. The relevant rates of exchange information is accessible on www.reservebank.co.za. Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011): US Dollar: Pound Sterling: Euro: Yen: Other: NB: Bidders must submit proof of the SARB rate (s) of exchange used.									
5.0	Were the Local Content Declaration Templates (Annex C, D and E) audited and certified as correct?	<table border="1"> <tr> <td>YES</td> <td>NO</td> </tr> </table>	YES	NO						
YES	NO									
5.1	If yes, provide the following particulars: (a) Full name of auditor: (b) Practice number: (c) Telephone number: Cell number: (d) Email address: (Documentary proof regarding the declaration will, when required, be submitted to the satisfaction of the Accounting Officer / Accounting Authority)									
6.0	Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the Accounting Officer / Accounting Authority provide directives in this regard.									

LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (Close Corporation, Partnership or Individual)

.....
IN RESPECT OF BID No:

.....
ISSUED BY: (Procurement Authority / Name of Municipality / Municipal Entity)

NB 1 - The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

NB 2 - Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thedti.gov.za/industrial_development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below. Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned in Section H of these Consolidated MBD returnable questionnaires (comprising 8 pages), do hereby declare the following:

- (a) The facts contained herein fall within my own personal knowledge.
- (b) I have satisfied myself that:
- the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
 - the declaration templates have been audited and certified to be correct.

- (c) The local content percentages (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C;

• Bid price, excluding VAT (y)	R
• Imported content (x), as calculated in terms of SATS 1286:2011.....	R
• Stipulated minimum threshold for local content (paragraph 3 above)	%
• Local content %, as calculated in terms of SATS 1286:2011	%

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

- (d) I accept that the Procurement Authority / Municipality /Municipal Entity has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Municipal / Municipal Entity imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPFA), 2000 (Act No. 5 of 2000).

SECTION G: MBD8: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

This Municipal Bidding Document must form part of all bids invited. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.

The bid of any bidder may be rejected if that bidder, or any of its directors have:

- abused the municipal entity's supply chain management system or committed any improper conduct in relation to such system;
- been convicted for fraud or corruption during the past five years;
- wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
- been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).

In order to give effect to the above, the following questions must be answered.

1.0	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer / Authority of the institution that imposed the restriction after the audi alteram partem rule was applied. The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page. If yes, furnish particulars:	YES	NO
2.0	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page. If yes, furnish particulars:	YES	NO
3.0	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years? If yes, furnish particulars:	YES	NO

4.0	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months? If yes, furnish particulars:	YES	NO
5.0	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract? If yes, furnish particulars:	YES	NO

SECTION H: MBD9: CERTIFICATE OF INDEPENDENT BID DETERMINATION

Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a pe se prohibition meaning that it cannot be justified under any grounds.

Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:

- (a) take all reasonable steps to prevent such abuse;
- (b) reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
- (c) cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.

The following MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.

In order to give effect to the above, the following Certificate of Bid Determination must be completed and submitted with the bid. The undersigned, in submitting the accompanying bid, in response to the invitation for the bid do hereby make the following statements that I certify to be true and complete in every respect:

- 1.0 I have read and I understand the contents of this Certificate;
- 2.0 I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
- 3.0 I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
- 4.0 Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
- 5.0 For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - a) has been requested to submit a bid in response to this bid invitation;
 - b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
- 6.0 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding. (Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.
- 7.0 In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - a) prices;
 - b) geographical area where product or service will be rendered (market allocation);
 - c) methods, factors, or formulas used to calculate prices;
 - d) the intention or decision to submit or not to submit, a bid;
 - e) the submission of a bid which does not meet the specifications and conditions of the bid;
 - f) bidding with the intention not to win the bid.
- 8.0 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 9.0 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 10.0 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

SECTION I: CONFIRMATIONS, AUTHORITIES, CERTIFICATIONS, ACKNOWLEDGEMENTS and SIGNATURES

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise:

- 1.0 Confirms that the contents of these Consolidated MBD returnable questionnaires (comprising 8 pages) fall within my personal knowledge and are to the best of my Knowledge and belief, both true and correct;
- 2.0 Confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercise, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- 3.0 Confirms that no partner, member, director, or other person, who wholly or partly exercise control over the enterprise, has within the last five years been convicted of fraud or corruption;
- 4.0 Confirms that I/we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- 5.0 Certify that the B-BBEE status level of contribution indicated in Section E.1: Item 1.0 qualifies the enterprise for preference points and acknowledges that the remedies as per Clause 14 of the Preferential Procurement Regulations (2017) shall apply. In the event of a contract being awarded as a result of points claimed, the enterprise may be required to furnish documentary proof to the satisfaction of the employer that the claims are correct;
- 6.0 Accept that, in addition to cancellation of a contract, action may be taken against me should these declarations prove to be false.

Signed Date

Name Position

The following is a statement of works of similar nature (in relation to the scope of works) recently (within the past 5 years) executed by myself / ourselves.

[illegible]

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

PROPOSED ORGANISATION and STAFFING

The tenderer should propose the structure and composition of their team i.e. the main disciplines involved, the key staff member / expert responsible for each discipline, and the proposed technical and support staff and site staff.

The roles and responsibilities of each key staff member / expert should be set out as job descriptions. In the case of an association / joint venture / consortium, it should, indicate how the duties and responsibilities are to be shared.

The tenderer must attach his / her organization and staffing proposals to this page. (this is to include both the on-site and off-site staffing resources used for this project)

In addition to any lists, this information should also be shown in an organogram format (flow chart) clearly indicating the staff hierarchy and reporting lines, again for on- and off-site resources.

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

KEY PERSONNEL

The Tenderer shall list below the personnel which he intends to utilize on the Works, including key personnel (Contract's Manager, Site Agent, and Foremen) which may have to be brought in from outside if not available locally.

CATEGORY OF EMPLOYEE	NUMBER OF PERSONS	
	KEY PERSONNEL, PART OF THE CONTRACTOR'S ORGANISATION	KEY PERSONNEL TO BE IMPORTED IF NOT AVAILABLE LOCALLY
Site Agent, Project Managers		
Foremen, Quality Control and Safety Personnel		
Technicians, Surveyors, etc		
Artisans and other Skilled workers		
Plant Operators		
Unskilled Workers		
Others:.....		
.....		

Note: CVs of key personnel may be requested during the contract period.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

EXPERIENCE OF KEY PERSONNEL

The experience of assigned staff member in relation to the Scope of Work will be evaluated from three different points of view:

- 1) General experience (total duration of professional activity), level of education and training and positions held of each discipline specific team leader.
- 2) The education, training, skills and experience of the Assigned Staff in the specific sector, field, subject, etc which is directly linked to the scope of work.
- 3) The key staff members' / experts' knowledge of issues which the tenderer considers pertinent to the project e.g. local conditions, affected communities, legislation, techniques etc.

A CV of the contract manager, site agent(s) and general foreman of not more than 2 pages should be attached to this schedule:

Each CV should be structured under the following headings:

- a) Personal particulars
 - name
 - date and place of birth
 - place (s) of tertiary education and dates associated therewith
 - professional awards
- b) Qualifications (degrees, diplomas, grades of membership of professional societies and professional registrations)
- c) Skills
- d) Name of current employer and position in enterprise
- e) Overview of post graduate / diploma experience (year, organization and position)
- f) Outline of recent assignments / experience that has a bearing on the scope of work

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

CONSTRUCTION APPROACH, METHODOLOGY, AND QUALITY CONTROL**Construction Approach and Methodology**

The construction approach and methodology must respond to the Scope of Work and outline the proposed approach to undertake the work showing a detailed programme including health and safety aspects, the use of plant and resources for this Project.

Quality Control

The quality control statement must discuss what tests and control measures are to be employed on site to attain the specified results and is to cover the program associated activities.

The tenderer must attach his / her Construction Methodology and Quality Control information to this page.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

SCHEDULE OF PROPOSED SUBCONTRACTORS

The following firms have been identified as possible subcontractors for work in this contract.

[illegible]

Attach additional pages if more space is required

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

PLANT and EQUIPMENT

The following are lists of major items of relevant equipment that I / we presently own or lease and will have available for this contract if my / our tender is accepted.

(a) Details of major equipment that is owned by me / us and immediately available for this contract.

DESCRIPTION (type, size, capacity etc)	QUANTITY	YEAR OF MANUFACTURE

Attach additional pages if more space is required

(b) Details of major equipment that will be hired, or acquired for this contract if my / our tender is accepted

DESCRIPTION (type, size, capacity etc)	QUANTITY	HOW ACQUIRED	
		HIRE/ BUY	SOURCE

Attach additional pages if more space is required

The Tenderer undertakes to bring onto site without additional cost to the Employer any additional plant not listed but which may be necessary to complete the contract within the specified contract period.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

CONTRACTOR'S HEALTH AND SAFETY PLAN

At tender stage only a brief overview (**to be attached to this page**) of the tenderers perception on the safety requirements for this contract will be adequate.

Only the successful Tenderer shall submit separately the Contractor's Health and Safety Plan as required in terms of Regulation 7 of the Occupational Health and Safety Act 1993 Construction Regulations 2014.

The detailed safety plan will take into consideration the site specific risks as mentioned under Part C.3: Project Specification. A generic plan will not be acceptable.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

CONTRACTOR'S HEALTH AND SAFETY DECLARATION

In terms of Clause 5(1)(h) of the OHSA 1993 Construction Regulations 2014 (referred to as "the Regulations" hereafter), a Principal Contractor may only be appointed to perform construction work if the Client is satisfied that the Principal Contractor has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHSA 1993 Construction Regulations 2014.

To that effect a person duly authorised by the tenderer must complete and sign the declaration hereafter in detail.

Declaration by Tenderer

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHSA 1993 Construction Regulations 2014.

2. I hereby declare that my company has the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.

3. I propose to achieve compliance with the Regulations by one of the following:

Tenderers are
to Circle Applicable

(a) From my own competent resources as detailed in 4(a) hereafter: **YES NO**

(b) From my own resources still to be appointed or trained until competency is achieved, as detailed in 4(b) hereafter: **YES NO**

(c) From outside sources by appointment of competent specialist Subcontractors as detailed in 4(c) hereafter: **YES NO**

4. Details of resources I propose:

(Note: Competent resources shall include safety personnel such as a construction supervisor and construction safety officer as defined in Regulation 8, and competent persons as defined in Regulations 9, 10, 11, 12, 13, 14, 16, 17, 20, 21, 22, 23(1), 24, 25, 26, 27, 28 and 29, as applicable).

(a) Details of the competent and qualified key persons from my company's own resources, who will form part of the contract team:

NAMES OF COMPETENT PERSONS	POSITIONS TO BE FILLED BY COMPETENT PERSONS

- (b) Details of training of persons from my company's own resources (or to be hired) who still have to be trained to achieve the necessary competency:
- (i) By whom will training be provided?
- (ii) When will training be undertaken?
- (iii) List the positions to be filled by persons to be trained or hired:
.....
.....
- (c) Details of competent resources to be appointed as subcontractors if competent persons cannot be supplied from own company:

Name of proposed subcontractor:

Qualifications or details of competency of the subcontractor:

.....

.....

5. I hereby undertake, if my tender is accepted, to provide, before commencement of the works under the contract, a suitable and sufficiently documented Health and Safety Plan in accordance with Regulation 7(1) of the Construction Regulations, which plan shall be subject to approval by the Client.
6. I confirm that copies of my company's approved Health and Safety Plan, the Client's Safety Specifications as well as the OHSA 1993 Construction Regulations 2014 will be provided on site and will at all times be available for inspection by the Principal Contractor's personnel, the Client's personnel, the Employer's Agent, visitors, and officials and inspectors of the Department of Labour.
7. I hereby confirm that adequate provision has been made in my tendered rates and prices in the Bill of Quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHSA 1993 Construction Regulations 2014, and that I will be liable for any penalties that may be applied by the Client in terms of the said Regulations (Regulation 33) for failure on the Principal Contractor's part to comply with the provisions of the Act and the Regulations.
8. I agree that my failure to complete and execute this declaration to the satisfaction of the Client will mean that I am unable to comply with the requirements of the OHSA 1993 Construction Regulations 2014, and accept that my tender will be prejudiced and may be rejected at the discretion of the Client.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

JOINT VENTURES AGREEMENTS

Joint Venture agreement and Power of Attorney Agreements to be attached here

RECORD OF ADDENDA TO TENDER DOCUMENTS

I / We confirm that the following communications received from the Employer or his representative before the date of submission of this tender offer, amending the tender documents, have been taken into account in this tender offer.

ADD.No	DATE	TITLE OR DETAILS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

NAME :

(Block Capitals)

SIGNATURE :

(of person authorised to sign on behalf of the Tenderer)

DATE:

AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

(This is not an invitation for amendments, deviations or alternatives but should the Tenderer desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder. The Employer will not consider any amendment, alternative offers or discounts unless forms (a), (b) and (c) have been completed to the satisfaction of the Employer).

I / We herewith propose the amendments, alternatives and discounts as set out in the tables below:

(a) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

- (1) *Amendments to the General and Special Conditions of Contract are not acceptable;*
 (2) *The Tenderer must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.*

(b) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

- (1) *Individual alternative items that do not justify an alternative tender, and an alternative offer for time for completion should be listed here.*
 (2) *In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.*
 (3) *Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.*

(c) DISCOUNTS

ITEM ON WHICH DISCOUNT IS OFFERED	DESCRIPTION OF DISCOUNT OFFERED

- (1) *The Tenderer must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer will be prejudiced.*

NAME :

(Block Capitals)

SIGNATURE :
 (of person authorised to sign on behalf of the Tenderer)

DATE:

PART C1: AGREEMENT AND CONTRACT DATA**C1.1: FORM OF OFFER AND ACCEPTANCE****C1.1.1: OFFER**

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

Contract No: Error! Reference source not found.

Contract Title: **Completion of Dr JL Dube Memorial Project, Inanda, Ethekeini Local Municipality, KwaZulu Natal Province**

The Tenderer, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data.

*** The offered total of the prices inclusive of Value Added Tax is:**

R..... (In words)
.....)

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

For the Tenderer:

*** Name of Tenderer (organisation)** :

*** Signature (of person authorized to sign the tender)** :

*** Name (of signatory in capitals)** :

Capacity (of Signatory) :

Address :

:

Witness:

Signature : **Date** :

Name (in capitals) : :

Notes:

*** Indicates what information is mandatory.**

Failure to complete the mandatory information and sign this form will invalidate the tender.

C1.1: FORM OF OFFER AND ACCEPTANCE**C1.1.2: FORM OF ACCEPTANCE****This Form will be completed by the Employer**

By signing this part of the Form of Offer and Acceptance, the Employer identified below accepts the Tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data. Acceptance of the Tenderer's Offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract are contained in:

- Part C1 : Agreement and Contract Data, (which includes this Agreement)
- Part C2 : Pricing Data, including the Bill of Quantities
- Part C3 : Scope of Work
- Part C4 : Site Information

and the schedules, forms, drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representatives of both parties.

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at, or just after, the date this Agreement comes into effect. Failure to fulfill any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within five days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

Signature (*person authorized to sign the acceptance*) :

Name (*of signatory in capitals*) :

Capacity (*of Signatory*) :

Name of Employer (*organisation*) :

Address :

:

Witness:

Signature : **Date** :

Name(*in capitals*) : :

C1.1: FORM OF OFFER AND ACCEPTANCE**C1.1.3: SCHEDULE OF DEVIATIONS**

This form will be completed by THE EMPLOYER and ONLY THE SUCCESSFUL TENDERER

1. **Subject** :
- Details** :
- :
2. **Subject** :
- Details** :
- :
3. **Subject** :
- Details** :
- :

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

FOR THE TENDERER**FOR THE EMPLOYER**

.....	Signature	
.....	Name (<i>in capitals</i>)	
.....	Capacity	
.....	Name and Address of	
.....	Organisation	
.....		
.....		
.....	Witness Signature	
.....	Witness Name	
.....	Date	

C1.2: CONTRACT DATA**C1.2.1 CONDITIONS OF CONTRACT****C1.2.1.1 THE JOINT BUILDING CONTRACTS COMMITTEE**

The Conditions of Contract are the Joint Building Contracts Committee (JBCC) – Principal Building Agreement Edition 6.2 – May 2018

The Contract Data (including variations and additions) shall amplify, modify or supersede, as the case may be, the JBCC Edition 6.2 -May 2018 the extent specified below, and shall take precedence and shall govern.

C1.2.2 CONTRACT DATA

JBCC contract data follows and comprises of 14 pages.



PRINCIPAL BUILDING AGREEMENT: CONTRACT DATA

Project

JL Dube Memorial Project

Employer

Risimati Consulting Engineers and Project Managers

Contractor

Contract Date 28 August 2020

File Code

VSB1160-A

The Joint Building Contracts Committee® - NPC
CONTRACT DATA
Principal Building Agreement
Edition 6.2 - May 2018

JBCC®

The Joint Building Contracts Committee® NPC (JBCC®) is representative of building owners and developers, professional consultants and general and specialist contractors who contribute their knowledge and experience to the compilation of the JBCC® documents. The JBCC® documents portray the consensus view of the constituent members and are published in the interests of standardisation and good practice with an equitable distribution of contractual risk

Application of JBCC® agreements

The definitions contained in the JBCC® Principal Building Agreement apply to this document. A word or phrase in bold type in the text has the same meaning assigned to it in the definitions of such agreement. Where a word or phrase is not in bold type it has the meaning consistent with the context of its use

This contract data contains unique requirements applicable to the project and variables referred to in the JBCC® Principal Building Agreement and the JBCC® General Preliminaries. The information provided in this document by the principal agent is complete and accurate at the time of calling for tenders. Where additional information becomes available, all tenderers will be informed in writing. Reference to clause numbers in the JBCC® Principal Building Agreement are shown in [square brackets] in this contract data eg [3.2.1]. Spaces requiring information must be filled in, or marked as 'not applicable' but not left blank

This contract data, when completed and submitted by the contractor, becomes the form of tender. Where the contractor is appointed, the contract documents comprise the signed JBCC® Principal Building Agreement, this completed contract data, the priced document, drawings and other listed documents

Warning!

The JBCC® Principal Building Agreement Edition 6.2 has been coordinated with the JBCC® Nominated/Selected Subcontract Agreement Edition 6.2, the JBCC® General Preliminaries and the JBCC® certificate forms and support documents. Forms from previous editions are not compatible with the JBCC® Principal Building Agreement Edition 6.2

Persons entering into or preparing contracts using the JBCC® suite of contract agreements and support documents are warned of the dangers inherent in modifying any part of it

Experience has shown that changes drafted by others, including members of the building professions, often have unintended results that may be prejudicial to either, or both, parties

Disclaimer

While the JBCC® aims to ensure that its publications represent best practice it does not accept or assume any liability or responsibility for any events or consequences which derive from the use of JBCC® documents

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A PROJECT INFORMATION

A 1.0 Works [1.1]

Project name	JL Dube Memorial Project
Reference number	VSB1160-A
Works description	Alterations and additions to existing structure, including necessary external works as indicated on architect - and engineers' drawings for JL Dube Memorial Project

A 2.0 Site [1.1]

Erf / stand number	Portion 398
Township / Suburb	Farm Piesang Rivier No 805, Inanda
Site address	108818 Ohlange Street, Inanda, 4310, KwaZulu-Natal
Local authority	Ethekwini

A 3.0 Employer [1.1]

Name	Risimati Consulting Engineers and Project Managers		
Legal entity of above	Registered Company	Contact person	Bheki Maseko
Business registration number	2004/00382/07	Telephone number	012-9981054
VAT/GST number	4040235352	Mobile number	0794945491
Country	South Africa	E-mail	behki@risimati.co.za
Postal address	P O Box 40092, Moreleta Park		
		Postal code	0049
Physical address	750 Blouhaak Street, Moreleta Park		
		Postal code	0044

A 4.0 Principal agent [1.1]

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

A 5.0 Agent [1.1; 6.2]

Discipline

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

A 6.0 Agent [1.1; 6.2]

Discipline

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

A 7.0 Agent [1.1; 6.2]

Discipline

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

A 8.0 Agent [1.1; 6.2]

Discipline

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

A 9.0 Agent [1.1; 6.2]

Discipline

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

A 10.0 Agent [1.1; 6.2]

Discipline

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

A 11.0 Agent [1.1; 6.2]

Discipline

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

A 12.0 Agent [1.1; 6.2]

Discipline

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

B CONTRACT INFORMATION

B 1.0 Definitions [1.1]

Bills of quantities: System/Method of measurement	Standard System of Measuring Building Work - 7th Ed
--	---

B 2.0 Law, regulations and notices [2.0]

Law applicable to the works , state country [2.1]	South Africa
---	--------------

B 3.0 Offer and acceptance [3.0]

Currency applicable to this agreement [3.2]	South African Rands
--	---------------------

B 4.0 Documents [5.0]

The original signed agreement is to be held by the principal agent [5.2], if not, indicate by whom	
Number of copies of construction information issued to the contractor at no cost [5.6]	3

Documents comprising the agreement	Page numbers
The JBCC ® Principal Building Agreement, Edition 6.2 May 2018	1 to 30
The JBCC ® Principal Building Agreement - Contract Data, Edition 6.2 May 2018	1 to 14
The JBCC ® General Preliminaries for use with the JBCC ® Principal Building Agreement, Edition 6.2 May 2018	1 to 7

Contract drawings – description	Number	Revision	Date
As per Architect – and Engineers' drawings register			

B 5.0 Employer’s agents [6.0]

Authority is delegated to the following agents to issue contract instructions and perform duties for specific aspects of the works [6.2]
N/A

Principal agent’s and agents’ interest or involvement in the works other than a professional interest [6.3]
N/A

B 6.0 Insurances [10.0]

Insurances by employer		Amount including tax	Deductible amount including tax
Contract works insurance:			
	New works [10.1.1] (contract sum or amount)		
or	Works with practical completion in sections [10.2] (contract sum or amount)		
or	Works with alterations and additions [10.3] (reinstatement value of existing structures with or including new works)	Contr value + 20%	R 10 000.00
	Direct contractors [10.1.1; 10.2] where applicable, to be included in the contract works insurance		
	Free issue [10.1.1; 10.2] where applicable, to be included in the contract works insurance		
	Escalation, professional fees and reinstatement costs if not included above		
Total of the above contract works insurance amount			
Supplementary insurance [10.1.2; 10.2]		N/A	
Public liability insurance [10.1.3; 10.2]		N/A	
Removal of lateral support insurance [10.1.4; 10.2]		N/A	
Other insurances [10.1.5]		N/A	
Yes/no?	If yes, description 1		
		N/A	
Yes/no?	If yes, description 2		
		N/A	

and/or

Insurances by contractor			Amount including tax	Deductible amount including tax
Contract works insurance:				
	New works [10.1.1] (contract sum or amount)		N/A	
	Direct contractors [10.1.1; 10.2] where applicable, to be included in the contract works insurance		N/A	
	Free issue [10.1.1; 10.2] where applicable, to be included in the contract works insurance		N/A	
	Escalation, professional fees and reinstatement costs if not included above			
Total of the above contract works insurance amount				
Supplementary insurance [10.1.2]				
Public liability insurance [10.1.3]			R 10 000 000.00	R 10 000.00
Removal of lateral support insurance [10.1.4]				
Other insurances [10.1.5]:				
Yes/no?		If yes, description 1	N/A	
Yes/no?		If yes, description 2	N/A	

B 7.0 Obligations of the employer [12.1]

Existing premises will be in use and occupied [12.1.2]		Yes/no?	No
If yes, description	As indicated during pre-tender site inspection		
Restriction of working hours [12.1.2]		Yes/no?	Yes
If yes, description	As indicated during pre-tender site inspection		
Natural features and known services to be preserved by the contractor [12.1.3]		Yes/no?	Yes
If yes, description	As indicated during pre-tender site inspection		
Restrictions to the site or areas that the contractor may not occupy [12.1.4]		Yes/no?	Yes
If yes, description	As indicated during pre-tender site inspection		
Supply of free issue [12.1.10]		Yes/no?	No
If yes, description			

B 8.0 Nominated subcontractors [14.0]

Specialisation 1	
Specialisation 2	
Specialisation 3	
Specialisation 4	
Specialisation 5	

B 9.0 Direct contractors [16.0]

Extent of work [12.1.11]	
Extent of work [12.1.11]	
Extent of work [12.1.11]	
Extent of work [12.1.11]	
Extent of work [12.1.11]	

B 10.0 Description of sections [20.1]

Section 1	
Section 2	
Section 3	
Section 4	
Section 5	
Section 6	
Section 7	
Section 8	
Section	Remainder of the works

B 11.0 Possession of site [12.1.5],practical completion[19.0;20.0] and penalties [24.0]

Practical completion for the works as a whole	Intended date of possession of the site [12.1.5]	Period for inspection by the principal agent [19.3]	Date for practical completion [12.2.7; 24.1]	Penalty [24.1]
	Date	working days	Date	Penalty amount per calendar day excl. TAX
	2020/10/01		2021/09/15	R 2 500.00

or where **sections** are applicable

Practical completion of a section of the works	Intended date of possession of a section [12.1.5]	Period for inspection by the principal agent [19.3]	Date for practical completion [12.2.7; 24.1]	Penalty [24.1]
	Date	working days	Date	Penalty amount per calendar day excl. TAX
Section 1				
Section 2				
Section 3				
Section 4				
Section 5				
Section 6				
Section 7				
Section 8				
Remainder of the works				

Criteria to achieve practical completion not covered in the definition of practical completion
N/A

B 12.0 Payment [25.0]

Date of month for issue of regular payment certificates [25.2]	30th	
Cost fluctuations [25.3.4; 26.9.5]	Yes/no?	No
If yes, method to calculate	N/A	

B 13.0 Dispute resolution [30.0]

Adjudication [30.6.1; 30.10] Name of nominating body	Association of Arbitrators (South Africa)
Applicable rules for adjudication [30.6.2]	Association of Arbitrators (South Africa)
Arbitration [30.7.4; 30.10] Name of nominating body	Association of Arbitrators (South Africa)
Applicable rules for arbitration [30.7.5]	Association of Arbitrators (South Africa) Rules

B 14.0 JBCC® General Preliminaries – selections

Provisional bills of quantities [P2.2]		Yes/no?	Yes	
Availability of construction information [P2.3]		Yes/no?	Yes	
Previous work - dimensional accuracy - details of previous contract(s) [P3.1]		N/A		
Previous work - defects - details of previous contract(s) [P3.2]		N/A		
Inspection of adjoining properties - details [P3.3]		N/A		
Handover of site in stages - specific requirements [P4.1]		N/A		
Enclosure of the works - specific requirements [P4.2]		Yes		
Geotechnical and other investigations - specific requirements [P4.3]		N/A		
Existing premises occupied - details [P4.5]		No		
Services - known - specific requirements [P4.6]				
Water [P8.1]	By contractor	Yes/no?	Yes	
	By employer	Yes/no?	No	
	By employer – metered	Yes/no?	No	
Electricity [P8.2]	By contractor	Yes/no?	Yes	
	By employer	Yes/no?	No	
	By employer – metered	Yes/no?	No	
Ablution and welfare facilities [P8.3]	By contractor	Yes/no?	Yes	
	By employer	Yes/no?	No	
Communication facilities - specific requirements [P8.4]		Yes, as indicated during pre-tender site inspection		
Protection of the works - specific requirements [P11.1]		Yes, as indicated during pre-tender site inspection		
Protection / isolation of existing works and works occupied in sections - specific requirements [P11.2]		Yes, as indicated during pre-tender site inspection		
Disturbance - specific requirements [P11.5]		Yes, as indicated during pre-tender site inspection		
Environmental disturbance - specific requirements [P11.6]		Yes, as indicated during pre-tender site inspection		

B 15.0 Changes made to JBCC® documentation

Reference may be made to other documents forming part of this agreement
N/A

JL Dube Memorial Project - 28 August 2020

C TENDER CLOSING

Tender closing date	2020/09/11	Time	11h00
Tender submission address	Ground Floor, Municipal Buildings, 166 KE Masinga Rd (Old Fort Rd), Durban		
Tender may be submitted by e-mail	yes/no?	No	E-mail N/A

D TENDERER'S SELECTIONS

D 1.0 Securities [11.0]

Guarantee for construction: Select Option A or B ☐

Option A	Guarantee for construction (variable) by contractor [11.1.1]
----------	--

Option B	Guarantee for construction (fixed) by contractor [11.1.2]
----------	---

Guarantee for payment by employer [11.5.1; 11.10]	Amount
---	--------

Advance payment, subject to a guarantee for advance payment [11.2.2; 11.3]	Amount
--	--------

D 2.0 Contractor's annual holiday periods during the construction period

Year 1 contractor's annual holiday period	start date		end date	
Year 2 contractor's annual holiday period	start date		end date	
Year 3 contractor's annual holiday period	start date		end date	

D 3.0 Payment of preliminaries [25.0]

Contractor's selection

Select Option A or B ☐

Where the contractor does not select an option, Option A shall apply

Option A	The preliminaries shall be paid in accordance with an amount prorated to the value of the works executed in the same ratio as the amount of the preliminaries to the contract sum, which contract sum shall exclude the amount of preliminaries. Contingency sum(s) and any provision for cost fluctuations shall be excluded for the calculation of the aforesaid ratio
----------	--

Option B	The preliminaries shall be paid in accordance with an amount agreed by the principal agent and the contractor in terms of the priced document to identify an initial establishment charge, a time-related charge and a final dis-establishment charge. Payment of the time-related charge shall be assessed by the principal agent and adjusted from time to time as may be necessary to take into account the rate of progress of the works
----------	--

Lump sum contract

Where the amount of preliminaries is not provided it shall be taken as 7.5% (seven and a half per cent) of the contract sum, excluding contingency sum(s) and any provision for cost fluctuations

D 4.0 Adjustment of preliminaries [26.9.4]

Contractor's selection

Select Option A or B ☐

Where the contractor does not select an option, Option A shall apply

Provision of particulars

The **contractor** shall provide the particulars for the purpose of the adjustment of **preliminaries** in terms of his selection. Where completion in **sections** is required, the **contractor** shall provide an apportionment of **preliminaries** per **section**

Option A	An allocation of the preliminaries amounts into Fixed, Value-related and Time-related amounts as defined for adjustment method Option A below, within fifteen (15) working days of the date of acceptance of the tender
Option B	A detailed breakdown of the preliminaries amounts within fifteen (15) working days of possession of the site . Such breakdown shall include, inter alia, the administrative and supervisory staff, the use of construction equipment , establishment and dis-establishment charges, insurances and guarantees, all in terms of the programme

Adjustment methods

The amount of **preliminaries** shall be adjusted to take account of the effect which changes in time and/or value have on **preliminaries**. Such adjustment shall be based on the particulars provided by the **contractor** for this purpose in terms of Options A or B, shall preclude any further adjustment of the amount of **preliminaries** and shall apply notwithstanding the actual employment of resources by the **contractor** in the execution of the **works**

Option A	The preliminaries shall be adjusted in accordance with the allocation of preliminaries amounts provided by the contractor, apportioned to sections where completion in sections is required Fixed - An amount which shall not be varied Value-related - An amount varied in proportion to the contract value as compared to the contract sum. Both the contract sum and the contract value shall exclude the amount of preliminaries, contingency sum(s) and any provision for cost fluctuations Time-related - An amount varied in proportion to the number of calendar days extension to the date of practical completion to which the contractor is entitled with an adjustment of the contract value [23.2; 23.3] as compared to the number of calendar days in the initial construction period [26.9.4]
Option B	The adjustment of preliminaries shall be based on the number of calendar days extension to the date of practical completion to which the contractor is entitled with an adjustment of the contract value [23.2; 23.3] as compared to the number of calendar days in the initial construction period [26.9.4] The adjustment shall take into account the resources as set out in the detailed breakdown of the preliminaries for the period of construction during which the delay occurred

Failure to provide particulars within the period stated

Option A	Where the allocation of preliminaries amounts for Option A is not provided, the following allocation of preliminaries amounts shall apply: Fixed - Ten per cent (10%) Value-related - Fifteen per cent (15%) Time-related - Seventy-five per cent (75%) Where the apportionment of the preliminaries per section is not provided, the categorised amounts shall be prorated to the cost of each section within the contract sum as determined by the principal agent
Option B	Where the detailed breakdown of preliminaries amounts for Option B is not provided, Option A shall apply

Lump sum contract

Where the amount of **preliminaries** is not provided it shall be taken as 7.5% (seven and a half per cent) of the **contract sum**, excluding contingency sum(s) and any provision for cost fluctuations

E FORM OF TENDER

E 1.0 Tenderer’s details

Name			
Legal entity of above		Contact person	
Business registration number		Telephone number	
VAT/GST number		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

E 2.0 Acceptance of tender conditions

By submission of this tender to the **employer** the tenderer offers and agrees to execute and complete the **works** and to remedy any **defects** in conformity with the specification for the tender amount stated

The tender shall remain in full legal force for forty-five (45) **calendar days** from the closing date of the tender. The tenderer accepts liability for loss or damages that may be suffered by the **employer** should the tender validity period not be honoured

The lowest or any tender will not necessarily be accepted by the **employer** nor will reasons be given for such a decision

E 3.0 Tender amount compilation

			Amount		
Tenderer's work excluding tax					
Tax	15	%			
Total tender amount including tax					
Total tender amount including tax , in words					

Signature	Tenderer who by signature hereto warrants authority	Place			
Name		Capacity		Date	

Signature	Witness	Place			
Name				Date	

E 4.0 Tender qualifications



JL Dube Memorial Project - 28 August 2020

C1.2.3 ADDITIONAL CONDITIONS OF CONTRACT

C1.2.3.1 COMMUNITY LIAISON OFFICER

The Ward Councillor(s) in whose ward(s) work is to be done will, collectively, identify a community liaison officer (CLO) for the project and make the person known to the Contractor within two days of being requested to do so. The Contractor will be required to enter a written contract with the CLO that specifies:

- The hours of work and the wage rate of the CLO (200% of the Civil Engineering Industry minimum wage).
- The duration of the appointment.
- The duties to be undertaken by the CLO which could include:
 - Assisting in all respects relating to the recruitment of local labour.
 - Acting as a source of information for the community and councillors on issues related to the contract.
 - Keeping the Contractor advised on community issues and issues pertaining to local security.
 - Assisting in setting up any meetings or negotiations with affected parties.
 - Keeping a written record of any labour or community issue that may arise.
 - Any other duties that may be required by the Contractor.

Responsibility for the identification of a pool of suitable labour shall rest with the CLO, although the Contractor shall have the right to choose from that pool. The Contractor shall have the right to determine the total number labourers required at any one time and this may vary during the contract.

The Contractor shall have the right to replace labour that is not performing adequately. Should such occasion arise, it must be done in conjunction with the CLO.

Payment: The CLO will be reimbursed from the PC Sum item in the Preliminary & General Section of the Bill of Quantities.

C1.2.3.2 EMPLOYMENT OF LOCAL LABOUR

It is a condition of contract that the contractor will be required to employ local labour as specified in eThekweni Council Policy "The use of CLOs and Local Labour". The contractor will be required to ensure that a minimum of 50% of the labour force is made up of local labour. For the purposes of this contract, "Local labour" will be deemed to be any **persons who reside within Ward(s) 57**. The contractor will be required to provide proof of authenticity of local labour. Signed confirmation by the appointed CLO will suffice for this.

No additional costs will be entertained due to this Particular Specification. The contractor will remain responsible for providing proper supervision of all labour and will be responsible for the quality of work produced.

C1.2.3.4 FTE (Full Time Equivalent) EMPLOYMENT INFORMATION

It is a condition of contract that the Contractor supplies the Employer's Agent's Representative with information in respect of the employment of all foremen, artisans and labour (skilled and unskilled) employed to work on this contract. The information required is:

- Initials (per ID doc)
- Last Name (per ID doc)
- ID Number
- Disability (y / n)

- Education Level

Level 1 Unknown	Level 2 No Schooling	Level 3 Grade 1-3	Level 4 Grade 4	Level 5 Grade 5-6
Level 6 Grade 7-8	Level 7 Grade 9	Level 8 Grade 10-11	Level 9 Grade 12	Level 10 Post Matric

- Category of Employment

Category A: Employed as Local Labour for this contract only
Category B: Temporarily employed by the Contractor
Category C: Permanently employed by the Contractor

In addition, the following information is required in respect of each person listed above, on a monthly basis:

- Number of days worked during the month;
- Daily wage rate;
- Number of training days during the month.

The information is to be forwarded in a format acceptable to the Employer's Agent's Representative, but preferably in the form of an emailed EXCEL file (an original file, to be used as a template, will be issued to the Contractor). Contractors without computer facilities will be required to submit a hard copy of the information in a format as agreed to between the Contractor and the Employer's Agent's Representative.

C1.2.3.5 PERFORMANCE MONITORING OF SERVICE PROVIDERS

The Contractor shall be subjected to "Performance Monitoring" assessments in terms of the applicable Section of the Employer's Supply Chain Management Policy.

Key Performance Indicators (KPIs) are specified in the Part C3: Scope of Works or will be discussed and agreed with the Contractor before commencement of the contract.

C1.2.3.6 EMPOWERMENT STRATEGIES

For contracts above R30m, the 2017 PPPFA Regulations require organs of State to identify tenders, where it is feasible, to subcontract a minimum of 30% of the value of the contract to the following designated groups:

- an EME or QSE;
- an EME or QSE which is at least 51% owned by black people;
- an EME or QSE which is at least 51% owned by black people who are youth;
- an EME or QSE which is at least 51% owned by black people who are women;
- an EME or QSE which is at least 51% owned by black people with disabilities;
- an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships;
- a cooperative which is at least 51% owned by black people;
- an EME or QSE which is at least 51% owned by black people who are military veterans; or
- more than one of the categories referred to in paragraphs (a) to (h).

In addition to the above, the eThekweni Municipal Council has adopted a framework for empowerment strategies for contracts between R5m and R30m.

C2.1: NOTE TO TENDERERS

C2.1. Notes to Tenders

Notes to tenders follows and comprises of 7 pages.

JL DUBE MEMORIAL PROJECT

NOTES TO TENDERERS

1. EMPLOYER

RISIMATI CONSULTING ENGINEERS AND PROJECT MANAGERS

2. IMPLEMENTING AGENT

RISIMATI CONSULTING ENGINEERS AND PROJECT MANAGERS

PO BOX 40092
MORELETA PARK
PRETORIA
0044

Tel : 012 - 998 1054

Fax: 012 - 998 0536

E-mail : bheki@risimati.co.za

3. DEFINITIONS

The word 'Architect' shall mean 'Principal Agent'

4. DOCUMENTS

The drawings, Model Preambles to Trades, Agreement, Schedule of Conditions of Building Contract and nature of Guarantee may be seen at the offices of the Principal Agent during office hours

5. PROVISIONAL BILLS OF QUANTITIES

These Provisional Bills of Quantities shall be deemed to have been prepared in accordance with 'THE STANDARD SYSTEM OF MEASURING BUILDING WORK' - Seventh Edition - 2015

Tenderers are advised to obtain a copy of this document and study the contents in full, as to ensure that no misunderstandings arise, as no claims whatsoever in this regard will be entertained

Should these Provisional Bills of Quantities be used for ordering of materials, it shall be done at the risk of the Contractor

All quantities are provisional, are an indication of the extent and type of work to be executed and have been inserted in order to obtain competitive tenders

All work carried out under this Contract shall be measured and valued at schedule rates in accordance with the Conditions of Contract

NOTES TO TENDERERS

JL DUBE MEMORIAL PROJECT

PROVISIONAL BILLS OF QUANTITIES

6. SITE

The site upon which the project is to be executed is :

108818
Ohlange Street
Inanda
4310
Kwazulu-Natal Province

Tenderers special attention is drawn to the following :

Tenderers are advised to visit the site and acquaint themselves fully with any site restrictions that might influence his tender prices, with specific attention to the following :

- a) Construction activities
- b) Movement on and access to the site regarding construction vehicles, personnel, etc
- c) Site enclosures, hoarding, etc
- d) Security measures, etc
- e) Existing buildings and structures
- f) Availability of electricity, water, etc
- g) Dust protection of existing facilities
- h) Noise/ sound transfer and protection

7. SCOPE OF WORKS

The works generally comprise of alterations and additions to existing structure, including necessary external works, all as shown on the architect's and engineer's drawings

The tenderer must ensure that he fully understands the specific scope of works, in relation to drawings issued and specific specifications accompanying these provisional bills of quantities

Tenderers must carefully study all tender documents and make themselves familiar with the nature and extent of the works before submitting prices for the works as no claims by the Tenderer, whatsoever based on his lack of knowledge of local contract conditions and site will be entertained

Digital photographs edited can be used for references and instructions during the contract

Any specific conditions regarding this tender will be distributed as an addendum by the Principal Agent if necessary

No claims in this regard will be entertained

NOTES TO TENDERERS
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

8. SITE INSPECTION

Tenderers are requested to inspect the premises in order to make themselves thoroughly acquainted with the nature of the works and specific site conditions

A compulsory Pre-tender site inspection meeting will be held on :

Date : 04 September 2020

Time: 11h00

Place: On site

9. QUERIES FROM TENDERERS

The pages of this Tender are numbered consecutively

The Tenderer shall check the numbers of the pages and should any be missing or duplicated, or the reproduction be indistinct, or if any doubt exists as to the full intent or meaning of any description or these Bills of Quantities contain any obvious errors, the Tenderer shall notify the Quantity Surveyor at once who shall promptly give a written directive. No liability whatsoever will be admitted in respect of errors, where these have not been brought to the Quantity Surveyors attention. On no account should these documents be used for placing orders for materials. Tenderers do so at their own risk, and shall not be reimbursed for additional costs so incurred

Before submitting the tender, the Tenderer shall be satisfied that the tender documents are complete. Any discrepancies, indistinct figures, writing or suspected errors should be reported to the Principal Agent immediately, who will issue written instructions for rectification

NB : ALL INFORMATION, SPECIFICATIONS, DESCRIPTIONS OR ITEMS, ETC. WHICH ARE UNCLEAR MUST BE BROUGHT TO THE ATTENTION OF THE PRINCIPAL AGENT BEFORE THE TENDERER SUBMITS HIS TENDER. DRAWINGS AND SPECIFICATIONS FROM THE ARCHITECT AND ENGINEER WILL IN ALL CIRCUMSTANCES PREVAIL

10. ACQUAINTANCE WITH TENDER DOCUMENTS

By submission of a tender, the Tenderer will be deemed to have acquainted himself fully with the tender documents, local authority requirements and by-laws, and any other statutory regulations and any special requirements from the Employer and all aspects of the work envisaged in the documents, prior to pricing and submission of his tender

11. SIGNING OF TENDERS

The tender must be signed by a representative of the tenderer being duly authorized to do so and Tenderers are to attach a company resolution

NOTES TO TENDERERS
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

12. TENDER ALL INCLUSIVE

The Tenderer must allow in his tender for all labour, material, transport, handling, construction plant, temporary works, or method of construction, and everything else necessary for the execution and completion of the works in accordance with the tender documents. Value Added Tax shall be added in the Final Summary Page

13. ALTERATIONS TO TENDER DOCUMENTS

No unauthorised alteration or addition shall be made to the Form of Tender or to any other portion of the Tender documents. If any such alteration is made, the Employer will not be bound by such alterations and the tender may be rejected

14. TENDER QUALIFICATIONS

Tenders must be submitted strictly in accordance with the Tender Documents, i.e. without qualifications. Qualifications in the nature of statements of interpretation of Contract Documents must be avoided and any point of doubt or difficulty should be cleared with the Quantity Surveyor as early as possible, during the tender period. Should any query raised by any Tenderer be considered in the opinion of the Quantity Surveyor to be of any influence to the tender, all other Tenderers shall immediately be informed in writing of the particulars by the Quantity Surveyor

15. COST INCURRED BY TENDERERS

The Employer will not be responsible for or pay for expenses or losses which may be incurred by any Tenderer in the preparation of the tender or in visiting the site in connection herewith

16. WITHDRAWAL OF TENDER AFTER CLOSING DATE

Should any Tenderer amend or withdraw his tender within the validity period, or should a Tenderer after having being notified that his tender has been accepted : -

- a. give notice of his inability to execute the contract in terms of this tender; or
- b. fail to sign a contract or furnish the security within the period fixed in the Tender Conditions reflected on the Form of Tender or any extended period fixed by the Employer; or
- c. fail to execute the contract;

He shall pay all additional expenses, damages and/or losses which the Employer may incur in calling for fresh tenders or by paying the difference between his tender and a less favourable tender accepted by the Employer at his sole discretion. Provided that the Employer may at his sole discretion exempt a Tenderer from the provisions of this sub rule if he is of the opinion that the circumstances justify the exemption

NOTES TO TENDERERS
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

17. ADDITIONAL INFORMATION REQUIRED

The Employer may ask any Tenderer for a clarification/s of his tender. Nevertheless, no Tenderer will be permitted to alter his tender sum after the tenders have been opened, although clarification that does not change the tender sum may be accepted

The Employer reserves the right to appoint a firm of public accountants to report on the financial capacity of any Tenderer. The Tenderer shall provide all reasonable help and information in such an investigation

All written information submitted by the Tenderer together with and in support of his tender shall be considered to form the basis on which the tender has been prepared and submitted

18. ARITHMETICAL ERRORS

The Quantity Surveyor reserves the right to correct arithmetical or other errors in the extension of rates and totals in the tender. The Tenderer will be informed of the effect of any corrections prior to the signing of the contract. In no case will the tender sum be adjusted when correcting such errors

19. IMBALANCE IN TENDERED RATES

In the event of there being any rate or rates which are declared to be unacceptable by the Quantity Surveyor for reasons which the Quantity Surveyor will indicate, the Tenderer will in terms of notes above be requested to :

- a. Justify such rate or rates, i.e. to give a financial breakdown on how such rate or rates were obtained or calculated, or
- b. If the Quantity Surveyor is not satisfied with such justification, amend and adjust such rate or rates to the reasonable satisfaction of the Quantity Surveyor while retaining the tender sum by adjusting such other as may be agreed with the Quantity Surveyor

In the event that the Quantity Surveyor requires the Tenderer to adjust any unacceptable rate or rates, the Quantity Surveyor may at his discretion limit any such adjustment to rates in specific sections of the Tender. On no account will the Quantity Surveyor permit the Tenderer to use such an opportunity to reprice extensive sections of the Tender, even though the tender sum remains unchanged

20. FIXED PRICE CONTRACT

This is a **fixed price contract**. The contract amount shall not be adjusted or subjected to any financial adjustments in respect of Contract Price Adjustment Provisions. The contractor must allow for any escalation, etc. in the rates, as no claim in this regard will be entertained

NOTES TO TENDERERS
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

21. PRICES AND VALUE ADDED TAX

Prices shall be quoted in South African currency and shall be **EXCLUSIVE** of Value Added Tax (VAT).

Provision is made in the Final Summary for the lump sum addition of VAT and the total, inclusive of VAT, is then carried to the **FORM OF TENDER** included in the Contract Data

22. ADJUDICATION, ACCEPTANCE OR REJECTION OF TENDERS

The employer does not bind himself to accept any, or the lowest, or portion of any tender, nor to give reasons for the rejection of any tender

23. SUBMISSION OF TENDERS

The Tender must be submitted on the form of tender which must be completed in full and marked clearly '**JL DUBE MEMORIAL PROJECT**' on:

Date : **11 September 2020**

Time : **11h00**

Address : **Ground floor, Municipal Buildings
166 K.E. Masinga Road (formerly Old Fort Road)
Durban
4001**

All tenderers are invited to be present at the opening of the tenders

24. INFORMATION TO BE PROVIDED BY TENDERERS

Late tenders will not be considered. Telegraphic and facsimile tenders will not be permitted

Tenderers are to provide the following information/documentation as set out below :

- (a) Contract Data Schedule
- (b) Form of Tender (included above)
- (c) Priced Provisional Bills of Quantities
- (d) Proof of Public Liability Insurance

25. PROTECTION OF EXISTING PREMISES

The area of the works must be properly hoarded off as described in Bill 1 - Preliminaries by means of sturdy indestructible material and maintained during building operations, removed and made good upon completion of the contract to ensure the safety of the public, visitors and staff at all times to the satisfaction of the Principal Agent

No claims for extras arising from the contractor having failed to comply with this clause will be entertained

NOTES TO TENDERERS
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

Special care must be taken to keep works watered to minimize dust interference with the rest of the premises

26. OCCUPATIONAL HEALTH AND SAFETY ACT 2003

The Builder shall fully adhere to the provisions of the **Occupational Health and Safety Act 2003 (Act 85)** as per Government Gazette 18 July 2003 and thereby indemnify the Employer, Principal Agent and other agents acting on behalf of the Employer in this regard

Additional documentation regarding Health and Safety aspects may be issued at the compulsory pre-tender site meeting

27. PAYMENT OF CERTIFICATES

1. The employer shall pay to the contractor the amount certified in an interim payment certificate within fourteen (30) calendar days of the date of issue of the payment certificate. Payment shall be subjected to the contractor giving the employer a tax invoice for the amount due
2. Tenderers are to make provision for this payment schedule as no claims will be entertained in this regard

28. GENERAL CONDITIONS REGARDING TENDER

Any specific conditions regarding this tender will be distributed as an addendum, if necessary

29. ISSUING OF INSTRUCTIONS

The contractor shall under no circumstances accept or carry out any instruction issued, other than those issued by the appointed Principal Agent

NOTES TO TENDERERS
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

C2.2: BILL OF QUANTITIES

The Bill of Quantities follows and comprises of 94 pages. The pages are numbered BOQ 8 to BOQ 102

JL DUBE MEMORIAL PROJECT

PROVISIONAL BILLS OF QUANTITIES

PREAMBLES FOR TRADES

The General Preambles for Trades 2017 and The Model Preambles for Trades 2008, published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these **bills of quantities** and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained

Supplementary preambles and/or specifications are incorporated in these **bills of quantities** to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles

The **contractor's** prices for all items throughout these **bills of quantities** shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications

STRUCTURE OF THIS PRELIMINARIES BILL

Section A : A recital of the headings of the individual clauses in the aforementioned **JBCC** Principal Building Agreement

Section B : A recital of the headings of the individual clauses in the aforementioned **JBCC** General Preliminaries

Section C : Any special clauses to meet the particular circumstances of the project

PRICING OF PRELIMINARIES

Should the **contractor** select Option A in the **contract data** for the adjustment of **preliminaries**, the amounts entered against the relevant items in these **preliminaries** are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T)

SECTION A: PRINCIPAL BUILDING AGREEMENT

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PROVISIONAL BILLS OF QUANTITIES

R

Interpretation (A1-A7)

1 Clause 1.0 - Definitions and interpretation

Pricing of bills of quantities

The **contractor** is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this **agreement**. Value Added Tax (VAT) is to be separately stated on the summary page of these **bills of quantities**

Items left unpriced will be deemed to be covered in prices against other items throughout these **bills of quantities** and no claim for any extras arising out of the **contractor's** omission to price any item will be entertained

Prices for all **construction equipment**, temporary works, services and other items shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary

Abbreviated descriptions

The items in these **bills of quantities** utilise abbreviated descriptions. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the **contractor** shall, before submission of his tender, call for a written directive from the **principal agent**, failing which it shall be assumed that the **contractor** has allowed in his pricing for materials and workmanship in terms of international best practice

Legal status of contractor

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If the **contractor** constitutes a joint venture, consortium or other unincorporated grouping of two or more persons then:

1. These persons are deemed to be jointly and severally liable to the **employer** for the performance of this **agreement**
2. These persons shall notify the **employer** of their leader who has assigned authority to bind the **contractor** and each of these persons
3. The **contractor** shall not alter its composition or legal status without the prior written consent of the **employer**

F:..... V:..... T:.....

Item

1 Clause 2.0 - **Law**, regulations and **notices**

2 **NHBRC levies**

The **employer** shall allow for and pay any levies required by the National Home Builders Registration Council (NHBRC). The **contractor** warrants that he is registered and will maintain registration with the NHBRC for the duration of this **agreement** [2.1]

F:..... V:..... T:.....

N/A

3 Clause 3.0 - Offer and acceptance

F:..... V:..... T:.....

Item

4 Clause 4.0 - Cession and assignment

F:..... V:..... T:.....

Item

5 Clause 5.0 - Documents

Value Added Tax

Provision is made in the summary page of these **bills of quantities** for the inclusion of Value Added Tax (VAT)

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Electronic issue of drawings

All drawings for this project will be issued electronically and the **contractor** shall be deemed to have received such drawings on the date that such drawings have been dispatched electronically [5.6]

F:..... V:..... T:.....

Item

1 **Clause 6.0 - Employer's agents**

Refer to PROCSA documentation for services and deliverables of each delegated authority and agent

Delegated authority

The authority of the **principal agent** to issue **contract instructions** [17.1] and perform duties for specific aspects of the **works** is delegated to **agents** [6.2]. This does not preclude the **principal agent** from issuing such **contract instructions**:

F:..... V:..... T:.....

Item

2 **Clause 7.0 - Design responsibility**

F:..... V:..... T:.....

Item

Insurances and securities (A8-A11)

3 **Clause 8.0 - Works risk**

F:..... V:..... T:.....

Item

4 **Clause 9.0 - Indemnities**

F:..... V:..... T:.....

Item

5 **Clause 10.0 - Insurances**

F:..... V:..... T:.....

Item

6 **Clause 11.0 - Securities**

Guarantee for payment

Carried to Collection

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The **employer** shall provide to the **contractor** a **guarantee for payment** in the amount of approximately the value of two payment certificates. The amount to be specified by the Principal Agent. The **contractor** shall consequently waive his lien or right of continuing possession of the **works** [11.10]

Extension of waiver of lien

The **contractor** shall ensure that a waiver of lien is included in all subcontracts and that the **works** executed on the **site** are kept free of all liens and other encumbrances at all times [11.10]

F:..... V:..... T:.....

Execution (A12 - A17)

1 Clause 12.0 - Obligations of the **parties**

Office accommodation

The **contractor** shall provide, maintain and remove on **practical completion** air conditioned office accommodation with suitable tables and chairs for meetings to be held on the **site**. Such offices shall be kept clean and fit for use at all times [12.2.18]

Notice board

The **contractor** shall erect in a position approved by the **principal agent**, maintain and remove on **practical completion** a notice board recommended by the South African Institute of Architects and as approved by the **principal agent** listing the names and logos of the **employer**, the **contractor** and the professional consultants. No subcontractor or supplier notice boards may be erected unless permission is granted by the **principal agent** for such notice boards to be erected [12.2.18]

Statutory and other notices

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Item

R

The **contractor** shall submit and/or comply with all statutory and other notices that may be required by any local or other authority in order not to cause any delay to the commencement of the **works** by the **contractor**.
The **contractor** shall pay all deposits or fees in this regard

It is, however, specifically recorded that the **employer** shall be responsible for the timeous approval of building plans by any local or other authorities and the payment of any fees or charges related thereto

F:..... V:..... T:.....

Item

1 Clause 13.0 - Setting out

F:..... V:..... T:.....

Item

2 Clause 14.0 - Nominated **subcontractors**

F:..... V:..... T:.....

Item

3 Clause 15.0 - Selected **subcontractors**

F:..... V:..... T:.....

Item

4 Clause 16.0 - **Direct contractors**

Attendance on direct contractors

In respect of **direct contractors** the **contractor** shall:

1. Designate an area for the **direct contractor** to establish a temporary office and workshop and storage of equipment and materials
2. Allow the use of personnel welfare facilities, where provided
3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation

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1	Clause 23.0 - Revision of the date for practical completion Substitution of materials and goods The removal or substitution of any materials and goods which do not conform to the specification or the contract drawings shall not constitute grounds for the extension of the construction period nor for the adjustment of the contract value [17.1.8; 23.1 & 2] F:..... V:..... T:.....	Item		
2	Clause 24.0 - Penalty for late or non-completion F:..... V:..... T:..... <u>Payment (A25 - A27)</u>	Item		
3	Clause 25.0 - Payment Prices submitted Where prices are submitted by the contractor or subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of this agreement and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the certificate of final completion, it shall be in writing F:..... V:..... T:.....	Item		
4	Clause 26.0 - Adjustment of the contract value and final account Fluctuations in costs All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the contractor [26.9.5]			
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Tenant installation/user requirements delayed

There is a possibility that certain works related to tenant installation/user requirements may have to be delayed and may consequently not be executed prior to **practical completion**

Should the **contractor** be instructed to do so he shall execute this work under the conditions pertaining to this **agreement** on the basis that a separate amount for **preliminaries** appurtenant to this work (if applicable) is agreed to between the **contractor** and the **principal agent** and on condition that instruction to proceed with such work is given to him within a period of three (3) calendar months after the date of **practical completion** of the **works**

The **employer** reserves the right to omit such work without compensation to the **contractor** for loss of profit or any other loss which the **contractor** may suffer as a result of such omission

Cost of claims

All costs incurred by the **contractor** in the preparation of claims shall be borne by the **contractor**. This provision shall not preclude an adjudicator or an arbitrator appointed in terms of this **agreement** [30.6 & 7] from making a determination on costs

Claims from subcontractors

The **contractor** shall review, assess and adjudicate any claims received by him from any **subcontractor** and thereafter submit same to the **principal agent** with a recommendation in order to assist the **principal agent** in adjudicating the claim [26.6]

F:..... V:..... T:.....

Item

- 1 Clause 27.0 - Recovery of expense and/or loss

F:..... V:..... T:.....

Item

Suspension and termination (A28 - A29)

- 2 Clause 28.0 - Suspension by the **contractor**

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	F:..... V:..... T:.....	Item	
1	Clause 29.0 - Termination		
	F:..... V:..... T:.....	Item	
	<u>Dispute resolution (A30)</u>		
2	Clause 30.0 - Dispute resolution		
	F:..... V:..... T:.....	Item	
3	<u>Agreement</u>		
	The required information of the parties and the amount of the contract sum shall be inserted in the agreement for signature of the agreement by the parties		
	F:..... V:..... T:.....	Item	
4	<u>Contract data</u>		
	Tenderer's selections		
	Before submission of his tender the contractor is to complete the tenderer's selections in the contract data		
	F:..... V:..... T:.....	Item	
	<u>SECTION B: GENERAL PRELIMINARIES</u>		
	<u>Definitions and interpretation (B1)</u>		
5	Clause 1.1 - Definitions		
	F:..... V:..... T:.....	Item	
6	Clause 1.2 - Interpretation		
	F:..... V:..... T:.....	Item	
	<u>Documents (B2)</u>		
7	Clause 2.1 - Checking of documents		
	F:..... V:..... T:.....	Item	
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1	Clause 2.2 - Provisional bills of quantities Multiple procurement These bills of quantities are in multiple procurement format, ie the "wet trades" - earthworks, concrete, formwork and reinforcement, precast concrete, masonry, waterproofing and sub-surface drainage - are provisionally measured and the subsequent trades are budgetary allowances and/or provisional sums F:..... V:..... T:.....	Item		
2	Clause 2.3 - Availability of construction information F:..... V:..... T:.....	Item		
3	Clause 2.4 - Ordering of materials and goods F:..... V:..... T:..... <u>Previous work and adjoining properties (B3)</u>	Item		
4	Clause 3.1 - Previous work - dimensional accuracy F:..... V:..... T:.....	Item		
5	Clause 3.2 - Previous work - defects F:..... V:..... T:.....	Item		
6	Clause 3.3 - Inspection of adjoining properties F:..... V:..... T:..... <u>The site (B4)</u>	Item		
7	Clause 4.1 - Handover of site in stages F:..... V:..... T:.....	Item		
8	Clause 4.2 - Enclosure of the works (By others elsewhere)	Item		
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The hoarding & fencing of the site for the protection of the public and others is complete and will be maintained by an independent contractor during the project. Specific hoarding requirements are described in the **contract data**

F:..... V:..... T:.....

1 Clause 4.3 - Geotechnical and other investigations

F:..... V:..... T:.....

Item

2 Clause 4.4 - Encroachments

F:..... V:..... T:.....

Item

3 Clause 4.5 - Existing premises occupied

F:..... V:..... T:.....

Item

4 Clause 4.6 - Services - known

F:..... V:..... T:.....

Item

Management of contract (B5)

5 Clause 5.1 - Management of the **works**

F:..... V:..... T:.....

Item

6 Clause 5.2 - Progress meetings

F:..... V:..... T:.....

Item

7 Clause 5.3 - Technical meetings

F:..... V:..... T:.....

Item

Samples, shop drawings and manufacturer's instructions (B6)

8 Clause 6.1 - Samples of materials

F:..... V:..... T:.....

Item

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Attendance on subcontractors (B10)

1 Clause 10.1 - General attendance

F:..... V:..... T:.....

Item

2 Clause 10.2 - Special attendance

F:..... V:..... T:.....

Item

General (B11)

3 Clause 11.1 - Protection of the **works**

F:..... V:..... T:.....

Item

4 Clause 11.2 - Protection/isolation of existing **works** and **works** occupied in **sections**

F:..... V:..... T:.....

Item

5 Clause 11.3 - Security of the **works**

F:..... V:..... T:.....

Item

6 Clause 11.4 - Notice before covering work

F:..... V:..... T:.....

Item

7 Clause 11.5 - Disturbance

Disturbance

All work is to be carried out in such a manner as to cause no unacceptable or unreasonable dust, noise, vibrations, nuisance, inconvenience, annoyance and the like to the public, others, other properties and traffic in so far as they exceed the permissible limitations set by government legislation or by the local authority. Any delays, stoppages and the like arising from or in order to comply with the above will not constitute grounds for an adjustment to the **construction period** or **contract value** whatsoever

F:..... V:..... T:.....

Item

8 Clause 11.6 - Environmental disturbance

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Controlling all forms of pollution

The **contractor** shall be responsible for and take all precautions in controlling by whatever means necessary all forms of pollution emanating from the **site** during the **construction period** due inter alia to noise, artificial light, wind-blown sand, dust, deposits of mud, etc

The **contractor** is to ensure that all roads which border the **site** and are used by the **contractor** during the execution of the **works** are kept clean and free of any dirt or debris caused by the execution of the **works**

Environmental management plan

The **employer** has prepared an environmental management plan (EMP). The **contractor** shall price opposite this item for compliance with all the requirements of such EMP

F:..... V:..... T:.....

Item

1 Clause 11.7 - **Works** cleaning and clearing

F:..... V:..... T:.....

Item

2 Clause 11.8 - Vermin

F:..... V:..... T:.....

Item

3 Clause 11.9 - Overhand work

F:..... V:..... T:.....

Item

4 Clause 11.10 - Tenant installations

F:..... V:..... T:.....

Item

5 Clause 11.11 - Advertising

F:..... V:..... T:.....

Item

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SECTION C: SPECIFIC PRELIMINARIES

1 Warranties for materials and workmanship

Where warranties for materials and/or workmanship are called for, the **contractor** shall obtain a written warranty, addressed to the **employer**, from the entity supplying the materials and/or executing the work and shall deliver same to the **principal agent** on **final completion** of the contract

The warranty shall state that workmanship, materials and installation are warranted for a specific period from the date of **practical completion** and that any **defects** that may arise during the specified period shall be made good at the expense of the entity supplying the materials and/or doing the work, upon written **notice** to do so

The warranty will not be enforced if the work is damaged by **defects** in the execution of the **works**, in which case the responsibility for replacement shall rest entirely with the **contractor**

F:..... V:..... T:.....

Item

2 Overtime

Should overtime be required to be worked for any reason whatsoever, the cost of such overtime is to be borne by the **contractor** unless the **principal agent** has specifically authorised, prior to execution thereof, that costs for such overtime are to be borne by the **employer**

F:..... V:..... T:.....

Item

3 Cooperation of the **contractor** for cost management

It is specifically agreed that the **contractor** accepts the obligation of assisting the **principal agent** in implementing proper cost management. The **contractor** will be advised by the **principal agent** of all cost management procedures which will be implemented to ensure that the **contract value** does not exceed the budget

F:..... V:..... T:.....

Item

Carried to Collection

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1	Overloading The contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the works or temporary works eg scaffolding, etc. The contractor shall submit details of his proposed loading, storage, plant erection, etc to the principal agent for approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the principal agent's requirements in connection with the provision of temporary support work, etc. Any damage caused to the works by overloading shall be made good by the contractor at his sole expense F:..... V:..... T:.....	Item	
2	Propping of floors below The contractor is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of materials and goods and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the principal agent and the cost thereof shall be borne by the contractor F:..... V:..... T:.....	Item	
3	Testing of flat roof waterproofing for watertightness Flat roof waterproof areas shall be flooded and kept "ponded" for at least forty eight (48) hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing F:..... V:..... T:.....	Item	
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Health and safety

Without limiting the generality of the provisions of clause 2.0, the **contractor's** attention is drawn to the provisions of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended. It is specifically stated that the **employer** shall prepare a documented health and safety specification for the **works** (attached) and that the **employer** shall ensure that the **contractor** has made provision for the cost of health and safety measures during the execution of the **works**. The **contractor** shall price opposite this item for compliance with the act and the regulations and the provisions of the aforementioned health and safety specification [2.1]

The **contractor** shall:

1. Comply with the health and safety specification for the **works**
2. Prepare and agree with the health and safety consultant the health and safety plan for the **works**
3. Cooperate with the health and safety consultant in all respects
4. Manage the compliance of all subcontractors with the regulations and with the health and safety plan and specification
5. Conform to the conditions contained in the **employer's** health and safety specification

F:..... V:..... T:.....

Item

1 Green star building certification

F:..... V:..... T:.....

Item

2 Broad based black economic empowerment (BBBEE)

Tenders submitted will be evaluated taking into account their empowerment rating

The **employer** will be monitoring the broad based black economic empowerment (BBBEE) status of the **contractor** throughout the execution of the **works**

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PRELIMINARIES
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	The contractor is to submit to the principal agent on an annual basis a schedule of spend, split into vendors engaged as subcontractors and suppliers indicating their BBBEE rating including proof of the said rating F:..... V:..... T:.....			
1	Advertising rights The employer may elect to contract with advertising agencies for the erection of advertising hoardings, banners, wraps or the like for the duration of the contract. The contractor shall not prevent such an arrangement and will assist in the facilitation of same. The position and type of advertising structure to be agreed with the principal agent so as not to hinder the contractor in meeting his obligations under this agreement F:..... V:..... T:.....	Item		
2	Confidentiality The contractor undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all subcontractors and suppliers. Such information shall not be used in any way except in connection with the execution of the works No information regarding this project shall be published or disclosed without the prior written consent of the employer F:..... V:..... T:.....	Item		
3	Media releases All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the employer The contractor together with his subcontractors shall not, without the prior written consent of the employer, cause any statement or advertisement connected with this project to be printed, screened or aired by the media F:..... V:..... T:.....	Item		
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SUMMARY OF CATEGORIES

Category : Fixed R.....

Category : Value R.....

Category : Time R.....

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PRELIMINARIES
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Bill No. 1

PRELIMINARIES

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Bill No. 1

PRELIMINARIES

JL DUBE MEMORIAL PROJECT

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Doors, fanlights, fittings, frames, linings, etc which are to be re-used shall be thoroughly overhauled before refixing including taking off, easing and rehangng, cramping up, re-wedging as required and making good cramps, dowels, etc, and easing, oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately

Prices for taking out of doors, windows, etc shall include for removal of all beads, architraves, ironmongery, etc

Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc and making good floor and wall finishes to match existing

With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc, shall be levelled and prepared for raising of brickwork

Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary

The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc)

In taking down and removing existing work the utmost care shall be observed to prevent any structural or other damage to remaining portions of the building and the Contractor shall provide all shoring, needling, strutting, etc. to ensure the stability of all structures during alteration work

Special care shall be exercised during the progress of the work to ensure that any electrical installations, water supply pipes, telephone and other services which may be encountered are not interfered with and notice shall be given to the Principal Agent if any disconnection or alterations become necessary

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Bill No. 2
ALTERATIONS
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Any water supply and other piping that may be encountered and which is found necessary to disconnect or cut shall, after such disconnection or cutting has been authorized by the Principal Agent, be effectively stopped off and any new connections that may be necessary made with the proper tees, junction pipes, etc. to the satisfaction of the Principal Agent

The Contractor shall afford every facility to workmen not under his control making disconnections and new connections as required to any services

MATERIALS FROM THE ALTERATIONS, CREDIT, ETC.

OLD MATERIALS TO BECOME THE PROPERTY OF THE EMPLOYER

All materials from alterations in a suitable working order to become the property of the Employer

OLD MATERIALS TO BE CARTED AWAY

Old materials from excavations, where described as to be "removed" as well as all rubbish, etc. must be regularly carted from the site and not be allowed to accumulate on or around the site

HANDING OVER OF MATERIALS

Where certain materials or articles from alterations are described as to be "handed over" to the Principal Agent, such material or articles shall be properly stored by the Contractor, until handing over thereof. The Contractor must obtain an official receipt listing the materials or articles and dates of handing over. If the Contractor fails to submit the receipt when requested, it shall be deemed that the materials or articles are still in his possession and he will be held liable for the full replacement value thereof, which amount will be deducted from monies due to the Contractor

SITE CLEARANCE ETC

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Bill No. 2
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**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

	<u>Site clearance</u>				
1	Sweeping up and removing rubbish consisting of dust, broken glass, dead birds, rodents, broken fittings, leaves, peeling paint, etc		Item		
	<u>REMOVAL OF EXISTING WORK</u>				
	<u>Breaking up and removing reinforced concrete, including cutting off and removing reinforcement</u>				
2	85mm Thick surface bed	m2	365		
3	Columns	m3	53		
4	Strip footings	m3	74		
5	170mm Thick ramps	m2	292		
6	Stairs and landings	m3	7		
	<u>Breaking up and removing unreinforced concrete</u>				
7	Concrete copings	m2	10		
8	Concrete anchor, size 2120 x 1670 x 1000mm high on plan	No	1		
	<u>Chipping off or grinding surface etc from concrete and preparing surfaces for new screed, etc</u>				
9	Concrete seating and floor surfaces	m2	1 372		
	<u>Breaking down and removing brickwork, etc</u>				
10	Half brick wall	m2	30		
11	One brick wall	m2	30		
12	One & half brick wall	m2	677		
	<u>Taking out doors, windows, etc, including thresholds, sills, etc,</u>				
13	Timber single door including frame not exceeding 2,5m²	No	5		
	Carried to Collection			R	
	Bill No. 2 ALTERATIONS JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES				

1	Timber single door including frame not exceeding 2,5m ² and setting aside for re-use including re-installation	No	6		
	<u>Taking out and removing piping, sanitary fittings, etc, including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere)</u>				
2	Vitreous china WC pan with flush valve, including short lengths of piping, etc	No	21		
3	Vitreous china wall hung urinal with flush valve, including short lengths of piping, etc and set aside for re-use including re-installation	No	12		
4	Steel wash hand basin, including short lengths of piping, etc to be set aside for re-use including re-installation	No	8		
5	Taps	No	1		
	<u>Taking out/off and removing glass and mirrors</u>				
6	Mirror 2000 x 1000mm high from wall and setting aside for re-use and re-installation	No	5		
	<u>Taking out/off and removing ironmongery work, fittings, etc</u>				
7	Paraplegic grab rail	No	4		
8	Soap dispensers and setting aside for re-use and including re-installation	No	8		
9	Toilet roll holders and setting aside for re-use and including re-installation	No	21		
	<u>Taking out/off and removing sundry joinery work, fittings, etc</u>				
10	Timber vanity 600 x 1100mm high including granite top, splashbacks, etc	m	22		
	<u>Taking out/off and removing sundry metalwork</u>				
11	Steel balustrades 1000mm high from concrete stairs and ramps, including making good granolithic finish	m	268		
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Bill No. 2 ALTERATIONS JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES					

CUTTING THROUGH FLOORS

- | | | | | | |
|---|--|----|----|--|--|
| 1 | Asphalt surfaces and making good including all necessary layer works | m2 | 50 | | |
|---|--|----|----|--|--|

BUDGETARY ALLOWANCES

Sundry building work

- | | | | | | |
|---|--|------|--|-----------|--|
| 2 | Allow for general and sundry alteration work to be re-measured on site at tender rates or evaluated against tender rates | Item | | 30 000.00 | |
|---|--|------|--|-----------|--|

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Bill No. 2
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ALTERATIONS

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ALTERATIONS

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<u>Excavation in earth not exceeding 2m deep</u>					
1	Trenches	m3	39		
2	Pile caps	m3	18		
<u>Extra over all excavations for carting away</u>					
3	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	37		
<u>Risk of collapse of excavations</u>					
4	Sides of trench and hole excavations not exceeding 1,5m deep	m2	56		
<u>Keeping excavations free of water</u>					
5	Keeping excavations free of all water other than subterranean water			Item	
<u>FILLING ETC</u>					
<u>Imported earth filling of G6 material in accordance with SABS 1200 DM, supplied by the contractor, compacted in 150mm layers to 95% Mod AASHTO density</u>					
6	Under floors, steps, pavings, etc	m3	915		
<u>Selected earth filling of G7 material in accordance with SABS 1200 DM, obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density</u>					
7	Under floors, steps, pavings, etc	m3	5		
<u>Earth filling of material from the excavations compacted to not less than 90% of the modified AASHTO density</u>					
8	Backfilling to trenches, holes, etc	m3	20		
9	Under floors, etc	m3	2		
Carried to Collection				R	
Bill No. 3 EARTHWORKS JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES					

Compaction of surfaces

1	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	702
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Prescribed density tests on filling

SOIL INSECTICIDE

2	Treatment of ground or filling with insecticides under floors including forming and poisoning furrows against foundation walls, etc filling in furrows and ramming	m2	702
3	To bottoms and sides of trenches, etc	m2	146

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Bill No. 3
EARTHWORKS
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

Bill No. 3

EARTHWORKS

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Bill No. 3

EARTHWORKS

**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

Specification for piling

The Standardised Specification for Civil Engineering Construction of the South African Bureau of Standards shall apply throughout in respect of this contract

A copy of the said specification shall be furnished by the contractor and shall be kept on the site

PROJECT SPECIFICATION

1. APPLICATION SPECIFICATION

1.1 SANS 10120 F: Piling

1.2 COLTO (1998 Edition)

Scope of work

The work comprises the design and installation of CFA piles. The contractor is referred to drawings issued together with these bills of quantities in order to acquaint himself fully with the nature and scope of the work.

Classification of material

"Hard rock" shall mean granite, quartzite sandstone or other rock of similar hardness, the removal of which would normally require drilling, wedging and splitting or the use of explosives

"Earth" shall mean all ground other than that classified as "hard rock" and shall include made-up ground and loose stones or pieces of concrete not exceeding 0,03m³ in volume as well as hard material the removal of which would normally warrant the use of pneumatic tools and which includes hard shale, ferrocite, compact outcrop and material of similar hardness

GUARANTEE AND INSURANCE

- | | |
|---|---|
| 1 | Provision of the specified piling guarantee and insurance |
|---|---|

Item

ESTABLISHMENT

- | | |
|---|--|
| 2 | Transporting to and establishment on site of necessary plant for the execution of the work and removal thereof on completion |
|---|--|

Item

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Bill No. 4
PILING

**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

1	Setting up plant at each pile position	No	10
2	Establishment of surveyor to set-out piles	No	1
3	Setting out of piles	No	10
<u>CONTINUOUS FLIGHT AUGER (CFA) IN-SITU CONCRETE PILES</u>			
<u>Continuous flight auger piles not exceeding 10m deep in earth below ground level including concrete, precast concrete, reinforcement, couplings, drilling, driving or boring, etc. complete</u>			
4	750mm Diameter pile shafts	m	100
<u>Continuous flight auger piles exceeding 10m and not exceeding 15m deep in earth below ground level including concrete, precast concrete, reinforcement, couplings, drilling, driving or boring, etc. complete</u>			
5	750mm Diameter pile shafts	m	50
<u>Extra over above items irrespective of depth to form augered pile holes:</u>			
6	Extra over drilling 750mm diameter pile shaft for under-reaming enlarged foot 1500mm diameter extreme and 600mm high	No	10
<u>Continuous flight auger drilling in strata of a more difficult character</u>			
7	Extra over continuous flight auger drilling in earth for continuous flight auger drilling in hard rock	m3	6
<u>Extra over drilling for carting away</u>			
8	Surplus material from pile shafts etc to a dumping site to be located by the contractor	m3	66
<u>Casings</u>			
9	Temporary casings to 750mm diameter pile shafts to prevent collapse of excavations, ingress of water, etc including removal	m	354

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Bill No. 4

PILING

JL DUBE MEMORIAL PROJECT

PROVISIONAL BILLS OF QUANTITIES

	<u>30MPa/19mm reinforced concrete</u>				
1	Additional concrete in enlarged foot 1500mm diameter extreme and 600mm high on 750mm diameter pile	No	10		
	<u>Formwork</u>				
2	Formwork to 750mm diameter pile above ground level	m	3		
	<u>TEST CUBES</u>				
3	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	18		
	<u>EXPOSING PILES FOR INSPECTION</u>				
4	Exposing pile for inspection including excavation 2m deep in earth and backfilling, compaction, etc.	No	10		
5	Exposing pile for inspection including excavation 4m deep in earth and backfilling, compaction, etc.	No	2		
	<u>TRIMMING ETC</u>				
	<u>Stripping back head of concrete pile for a height of 200mm to expose reinforcement, including trimming to defined level and bending reinforcement as necessary for casting into pile cap</u>				
6	750mm Diameter pile	No	10		
	<u>TESTING</u>				
7	Transporting to and establishment on site of necessary testing plant for compression load test		Item		
8	750mm - 2540kN working load	No	1		
9	Transporting to and establishment on site of necessary testing plant for integrity testing and removal thereof on completion		Item		
10	Integrity testing of 100% of the piles as required by the Engineer (by means of impact frequency response IFR method)	No	10		
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	Bill No. 4 PILING JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES				

BUDGETARY ALLOWANCES

1 Allow for the survey of piles after construction by a Land Surveyor

Item

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Bill No. 4
PILING
**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

Bill No. 4

PILING

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Bill No. 4
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**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<u>BILL 5 : CONCRETE, FORMWORK & REINFORCEMENT</u>			
	<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>			
	<u>20MPa/19mm concrete</u>			
1	In surface beds	m3	36	
	<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>			
	<u>25MPa/19mm concrete</u>			
2	In strip footings	m3	10	
3	Pile caps	m3	8	
4	Bases	m3	99	
5	Stub columns	m3	3	
6	Ground beams	m3	0.4	
	<u>REINFORCED CONCRETE CAST ON/IN FORMWORK</u>			
	<u>25MPa/19mm concrete</u>			
7	Ramps	m3	43	
8	In stairs and landings	m3	9	
	<u>30MPa/19mm concrete</u>			
9	Columns in foundations	m3	2	
10	Columns	m3	20	
11	Retaining walls	m3	18	
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	Bill No. 5			
	CONCRETE, FORMWORK AND REINFORCEMENT			
	JL DUBE MEMORIAL PROJECT			
	PROVISIONAL BILLS OF QUANTITIES			

TEST BLOCKS

- | | | | |
|---|--|----|----|
| 1 | Making and testing 150 x 150 x 150mm concrete strength test cube | No | 22 |
|---|--|----|----|

CONCRETE SUNDRIES**Finishing top surfaces of concrete smooth with a wood trowel**

- | | | | |
|---|-----------------------------------|----|-----|
| 2 | Tops of slabs, surface beds, etc. | m2 | 355 |
|---|-----------------------------------|----|-----|

ROUGH FORMWORK (DEGREE OF ACCURACY II)**Rough formwork to sides**

- | | | | |
|---|--|---|-----|
| 3 | Sloping edge of ramp 170mm high and propping up to 3m high extreme above bearing level | m | 132 |
|---|--|---|-----|

- | | | | |
|---|--|---|----|
| 4 | Edges, risers, ends and reveals not exceeding 300mm high or wide | m | 10 |
|---|--|---|----|

- | | | | |
|---|--|----|-----|
| 5 | Square columns with total height exceeding 5m but not exceeding 6,5m above bearing level | m2 | 130 |
|---|--|----|-----|

- | | | | |
|---|--|----|----|
| 6 | Square columns with total height not exceeding 1.5m in foundations | m2 | 12 |
|---|--|----|----|

Boxing in rough formwork to form

- | | | | |
|---|------------------------------------|---|----|
| 7 | 25 x 25 Vertical chamfer at corner | m | 64 |
|---|------------------------------------|---|----|

MOVEMENT JOINTS, ETC**Saw-cut joints**

- | | | | |
|---|---|---|-----|
| 8 | 3x25mm Saw cut joints filled in with polysulphide highway grade sealant | m | 435 |
|---|---|---|-----|

10mm 'Jointex' or similar approved expansion joint forming material vertically between concrete and brick surfaces including sealing with approved polysulphide sealant on external faces

- | | | | |
|---|--|---|-----|
| 9 | Not exceeding 300mm high to edges of surface beds, slabs, etc. | m | 280 |
|---|--|---|-----|

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Bill No. 5
 CONCRETE, FORMWORK AND REINFORCEMENT
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

REINFORCEMENT

Steel reinforcement to structural concrete work

1	Various diameter bars	t	13.18
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Fabric reinforcement

2	Type 245 fabric reinforcement in concrete surface beds, slabs, etc	m2	355
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Bill No. 5
 CONCRETE, FORMWORK AND REINFORCEMENT
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CONCRETE, FORMWORK AND REINFORCEMENT

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Bill No. 5

CONCRETE, FORMWORK AND REINFORCEMENT

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PROVISIONAL BILLS OF QUANTITIES

Item No		Quantity	Rate	Amount
	<u>BILL 6 : BRICKWORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>BRICKWORK</u>			
	<u>Sizes in descriptions</u>			
	Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
	<u>BRICKWORK</u>			
	<u>FOUNDATIONS</u>			
	<u>Brickwork of NFX bricks (14MPa nominal compressive strength) in class I mortar in stretcher bond</u>			
1	One brick wall	m2	42	
2	One & half brick wall	m2	407	
	<u>SUPERSTRUCTURE</u>			
	<u>Brickwork of NFP bricks in class II mortar in stretcher bond</u>			
3	Half brick wall	m2	5	
4	One brick wall	m2	139	
5	One & half brick wall	m2	270	
	<u>BRICKWORK SUNDRIES</u>			
	<u>2,8mm Brickwork reinforcement</u>			
6	150mm Wide reinforcement built in horizontally	m	598	
7	225mm Wide reinforcement built in horizontally	m	1 990	
	Carried to Collection			
	Bill No. 6 MASONRY JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES			
			R	

FACE BRICKWORK

3	Extra over brickwork for face brickwork	m2	389
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4	220mm wide face brick on edge Jointed on top and two sides	m	26
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Bill No. 6

MASONRY

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Bill No. 6

MASONRY

**JL DUBE MEMORIAL PROJECT
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Item No		Quantity	Rate	Amount
<u>BILL 10 : STRUCTURAL STEELWORK</u>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions</u>				
Descriptions of bolts shall be deemed to include nuts and washers				
Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete				
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete				
<u>STEEL TRUSSES</u>				
<u>The following in lattice trusses with flat bearer and connection plates, welded and bolted to steel</u>				
1	Top rail of 193,7 x 4,5 x 21,0kg/m angle section welded back-to-back	kg	225	
2	Bottom rail of 193,7 x 6,0 x 27,8kg/m angle section welded back-to-back	kg	1 334	
3	Vertical members of 165,1 x 3,0 x 12,0kg/m angle section welded back-to-back	kg	312	
4	165,1 x 4,0 x 15,9kg/m Angle section diagonal members	kg	986	
5	91 x 180mm x 18,8kg/m IPE180 universal beam bearers welded and bolted to steel	kg	2 237.20	
6	Top rail of 139,7 x 4,0 x 13,4kg/m angle section welded back-to-back	kg	6 861	
Carried to Collection			R	
Bill No. 10 STRUCTURAL STEELWORK JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES				

1	Bottom rail of 139,7 x 4,0 x 13,4kg/m angle section welded back-to-back	kg	6 767
2	Vertical members of 88,9 x 3,0 x 6,36kg/m angle section welded back-to-back	kg	2 105
3	88,9 x 3,0 x 4 x 6,36kg/m Angle section diagonal members	kg	3 981
<u>The following in lattice circular trusses with flat bearer and connection plates, welded and bolted to steel</u>			
4	Top rail of 152,4 x 4,0 x 14,6kg/m angle section welded back-to-back	kg	2 453
5	Bottom rail of 152,4 x 4,0 x 14,6kg/m angle section welded back-to-back	kg	2 219
6	101,6 x 3,0 x 7,29kg/m Angle section vertical members	kg	758
7	101,6 x 3,0 x 7,29kg/m Angle section diagonal members	kg	1 400
<u>STEEL PURLINS, GIRTS, BRACING, ETC.</u>			
<u>Purlins and girts, bolted to steel</u>			
8	175 x 65 x 20 x 3.0mm Thick cold-formed lipped channel purlins	t	9.30
<u>Welded bracing, anti-sag rails, etc with flat connection plates, bolted to steel</u>			
9	48,4 x 3,5mm anti-sag bars	t	2.04
10	63,5 x 3,0mm Cross bracing	t	0.92
11	48,5 x 3mm Knee bracing	t	4.10

STEEL COLUMNS AND BEAMS**Carried to Collection**

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Bill No. 10
STRUCTURAL STEELWORK
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

	<u>Welded columns, with flat bearer and connection plates, bolted to concrete and brick work</u>		
1	457 x 191mm x 67kg/m I-section columns	t	2.94
	<u>Sundries</u>		
2	Base plates, face plates, connector plates, etc	t	5.17
	<u>STEEL GUTTERS AND RAINWATER PIPES</u>		
	<u>2mm galvanised steel gutter</u>		
3	Box gutters 615mm girth, 2 times bent along length including necessary collared and sealed expansion joints (bearers elsewhere)	t	1.52
	<u>Welded plate rainwater pipes, including holderbats, brackets, etc</u>		
4	110mm diameter downpipes	m	16
	<u>BOLTS, FASTENERS, ETC</u>		
5	16mm Diameter x 100mm long	No	4 272
6	24mm Diameter x 140mm long	No	232
7	24mm Diameter x 140mm long expansion bolt	No	60
	<u>SHOP DRAWINGS</u>		
8	Provision for shop drawings		Item
	<u>PAINTING</u>		
	<u>SUPPLEMENTARY PREAMBLES</u>		
	<u>THE FOLLOWING IN GENERAL BUILDING STRUCTURE</u>		
	<u>STEEL COLUMNS AND BEAMS</u>		
	<u>Welded columns, with flat bearer and connection plates, bolted to concrete and brick work</u>		
9	254 x 146mm x 37,0kg/m I-section universal beams	t	4.23
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Bill No. 10 STRUCTURAL STEELWORK JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES			

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Welded beams in single lengths with flat bearer and connection plates, bolted to concrete and brick work

1	254 x 146mm x 37,0kg/m I-section universal beams	t	3.96
2	356 x 171mm x 57,0kg/m I-section universal beams	t	2.45

Sundries

3	Base plates, face plates, connector plates, etc	t	0.47
4	Wrapping existing 340 x 340 x 3450mm high concrete columns with 6mm steel plate welded with 6mm continuous fillet weld including 3mm Sikadur adhesive and M16 chemical anchor bolts (28 in no) and wire mesh to receive plaster (plaster elsewhere measured) all as per engineers specification (Refer to drawing no BAP023/01-02/04)	No	6

BOLTS, FASTENERS, ETC

5	16mm Diameter x 100mm long chemical anchor bolts	No	356
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STRUCTURAL STEELWORK

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STRUCTURAL STEELWORK
**JL DUBE MEMORIAL PROJECT
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Item No		Quantity	Rate	Amount
	<u>BILL 11 : METALWORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Descriptions</u>			
	Descriptions to be read in conjunction with drawings for architectural door dimensions, as drawings will in all circumstance prevail over this document			
	<u>Descriptions of bolts, anchors, etc</u>			
	Descriptions of bolts shall be deemed to include nuts and washers			
	Items described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described			
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres			
	<u>STEEL BALUSTRADES</u>			
	<u>GALVANISED STEEL BALUSTRADES</u>			
	<u>Welded balustrades to walkways and stairs</u>			
1	50 x 8mm Flat section continuous handrails	kg	968	
2	50 x 8mm Flat section continuous middle and bottom rails	kg	4 839	
3	50 x 8mm Flat section balusters	kg	1 936	
4	Extra over for flat closed end	No	24	
5	Extra over for T-intersection	No	6	
6	Extra over for bend across edge	No	22	
7	Extra over for ramp or knee	No	14	
	Carried to Collection			
	Bill No. 11 METALWORK JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES			
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Bill No. 11

METALWORK

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Bill No. 11

METALWORK

**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<u>BILL 12 : PLASTERING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>GRANOLITHIC</u>			
	<u>Method</u>			
	The method to be used shall be either the monolithic method or the bonded method			
	<u>Preparation</u>			
	For granolithic applied monolithically, the concrete floor shall be swept clean after bleeding of the concrete has ceased and the slab has begun to stiffen; any remaining bleed water shall be removed and the granolithic applied immediately thereafter. For granolithic to be bonded to the floor slab after it has hardened, the slab surface shall be hacked (preferably by mechanical means) until all laitance, dirt, oil, etc is dislodged and swept clean of all loose matter. The slab shall then be wetted and kept damp for at least six hours before applying the granolithic			
	<u>Mix</u>			
	Granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic			
	<u>Panels</u>			
	Granolithic shall be laid in panels not exceeding 14m ² for monolithic finishes, not exceeding 9,5m ² for bonded finishes and not exceeding 6m ² for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width			
	Carried to Collection		R	
	Bill No. 12 PLASTERING JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES			

Where possible joints between panels shall be positioned over joints in the floor slab and shall be at least 3mm wide through the full thickness of the finish, separated by strips of wood or fibreboard and finished with V-joints

Laying

Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels

Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels

After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated

Curing, seasoning and protection

Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying

Colour

Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour

SCREEDS

Cement plaster screeds wood floated on concrete

1	25mm thick on floors and landings	m2	1 280
2	Ditto, to treads and risers of stairs, steps, etc	m2	50

Structural screeds wood floated, on concrete

3	25mm thick On floors and landings	m2	899
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PLASTERING

**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

SPECIALIST FLOOR FINISHES

Prepare and apply one coat Flowprime solvent free epoxy primer and base coat and one coat Grey 7770 coloured quarts to a minimum 4mm thickness, with a maximum overcoating time of 48 hours and apply Peran STB sealer coat (spread rate -2m2/litre) applied in accordance with approved flowcrete specifications by approved applicators.

1	On floors and landings	m2	1 027
2	On treads and risers of stairs, steps, etc	m2	50

Prepare and apply one coat Flowprime solvent free epoxy primer and base coat and one coat Creme 7700 coloured quarts to a minimum 4mm thickness, with a maximum overcoating time of 48 hours and apply Peran STB sealer coat (spread rate -2m2/litre) applied in accordance with approved flowcrete specifications by approved applicators.

3	On floors and landings	m2	904
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INTERNAL PLASTER

Cement plaster wood floated, on brickwork (second coat elsewhere)

4	On walls	m2	75
5	On Narrow widths	m2	2

Cement plaster wood floated, on concrete (second coat elsewhere)

6	On projecting and isolated columns	m2	38
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'Rhinolite' or Similar approved gypsum plaster skim coat on plastered surfaces

7	On walls	m2	1 966
8	On projecting and isolated columns	m2	38
9	On narrow widths	m2	32

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Bill No. 12
PLASTERING
JL DUBE MEMORIAL PROJECT
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EXTERNAL PLASTER

Cement plaster wood floated, on brickwork

1 On walls

m2

5

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PLASTERING
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PLASTERING
**JL DUBE MEMORIAL PROJECT
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Item No		Quantity	Rate	Amount
	<u>BILL 13 : PLUMBING & DRAINAGE</u>			
	<u>SANITARY FITTINGS</u>			
	<u>'Duravit'</u>			
	<u>Ceramic</u>			
1	Duravit Happy D.2 ceramic closed coupled pan colour White (Code: 213409 0000), size 355 x 650mm x 810mm with SoftClose seat (Code: 006459 0000) and close coupled cistern (code: 093410 0085) screwed with stainless steel screws to plugs in floor with foot of bowl sealed to floor with abe Dow Corning acetoxysilicone sealant.	No	35	
2	Duravit D-Code colour White Alpin (Code: 82930 0000) size 305 x 290mm, fixed to wall with 2No. 8 x 120mm mounting bolts.	No	2	
3	Duravit D-Code paraplegic wall hung pan barrier free (Code: 222809), size 360 x 700mm white	No	2	
4	Hansgrohe logis chrome 100 single lever basin mixer without waste set (Code:71101003) with a maximum flow rate of 5.00 L/min	No	24	
5	Cobra medical pillar tap - blue indice Vendor: Cobra SKU: NM-502-21B	No	2	
	<u>Bathroom buttlr'</u>			
6	Stainless steel GRCS02B Cistern 670mm grab rail size 791mm x 277mm x 92mm SKU: 028396	No	2	
7	Stainless steel GRDG02B paraplegic dog leg 2 support grab rail twice bent, size 604mm x 106mm x 604mm	No	2	
	<u>FIRE HOSE REEL AND EXTINGUISHERS</u>			
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	Bill No. 13 PLUMBING AND DRAINAGE JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES			

The contractor shall make provision for Fire extinguishers including backing board in accordance to SANS 10400 and Local Fire Department Regulations.

3	Internal 5kg Co2 Fire extinguisher	No	2
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The contractor shall make provision for 150mm high pictogram combination Framed Photo luminescent Fire and Escape Signage in accordance to SANS 10400 and Local Fire Department Regulations.

Bill No. 13
PLUMBING AND DRAINAGE
JL DUBE MEMORIAL PROJECT
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Bill No. 13

PLUMBING AND DRAINAGE

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Bill No. 13
PLUMBING AND DRAINAGE
**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<u>BILL 14 : ELECTRICAL WORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Specifications, drawings, etc</u>			
	Tenderers are referred to the specification and drawings accompanying these bills of quantities for the electrical work, for the full descriptions of the following items which are to be read and priced in conjunction with the said specification and drawings			
	<u>SITE ESTABLISHMENT</u>			
1	Allow for the electrical site establishment, all associated services and storage of plant, materials and equipment including protection, P&G and transport and travelling for 3 months		SUM	
	<u>DRAWINGS</u>			
2	Making reference, to other relevant drawings e.g Civil, Structural, Architectural existing services etc.		SUM	
	<u>EXTRACTS FROM THE PRINCIPAL CONTRACTOR</u>			
3	Allowance for any costs associated with the requirements of the Principal Contract preliminaries which may affect the selected sub contract.		SUM	
	<u>GUARANTEE PERIOD</u>			
4	Allowance for a guarantee period of 12 months on all the electrical and electronic equipment but items such as lamps excluded		SUM	
	<u>ADDITIONAL</u>			
	<u>Allow for the following additional item(s):</u>			
5	Ablution facilities		SUM	
6	Water & electrical temporary connections		SUM	
	Carried to Collection		R	
	Bill No. 14 ELECTRICAL WORK JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES			

Equipment to be provided in distribution board

See attached single line drawing diagram for details of the equipment to be provided in the electrical distribution board complete as per the attached single line diagrams:

1	DB - Kiosk complete with circuit breakers including supply and installation		Item
2	DB - A complete with circuit breakers including supply and installation		Item
3	DB - B complete with circuit breakers including supply and installation		Item
4	DB - Tuck1 complete with circuit breakers including supply and installation		Item
5	DB - Tuck2 complete with circuit breakers including supply and installation		Item
6	DB - Data/Tel including supply and installation		Item
7	Electrical danger signs including supply and installation	No	5
8	Commissioning of distribution boards	No	5

LOW VOLTAGE CABLES

600/100V Grade PVC/PVC/SWA/PVC stranded copper conductor cables, terminations and bare copper earth conductors

9	70mm sqr 4 core PVC PVC SWA PVC cables from transformer to kiosk including supply and installation	m	180
10	35mm sqr bare copper conductor including supply and installation	m	90
11	50mm sqr 4 core PVC PVC SWA PVC cables including supply and installation	m	50

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ELECTRICAL WORK
JL DUBE MEMORIAL PROJECT
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1	25mm sqr bare copper conductor including supply and installation	m	25		
2	25mm sqr 4 core PVC PVC SWA PVC cables including supply and installation	m	200		
3	16mm sqr bare copper conductor including supply and installation	m	100		
4	Cable termination of 50mm sqr 4 core cable and BCEW complete with glands, shrouds, lugs, connections and commissioning including supply and installation	No	2		
5	Cable termination of 25mm sqr 4 core cable and BCEW complete with glands, shrouds, lugs, connections and commissioning including supply and installation	No	2		
6	1 x 10mm sqr 3 core PVC PVC SWA PVC cables including supply and installation	m	120		
7	1 x 6mm sqr 3 core PVC PVC SWA PVC cables including supply and installation	m	600		
8	Cable termination of 10mm sqr 3 core cable and 50mm BCEW complete with glands, shrouds, lugs, connections and commissioning including supply and installation	No	2		
9	Cable termination of 6mm sqr 3 core cable and 50mm BCEW complete with glands, shrouds, lugs, connections and commissioning including supply and installation	No	2		
<u>SLEEVES</u>					
Allowance should be made for the following electrical equipment					
Heavy duty PVC cable sleeves complete installed in trenches with all accessories required including joints, bends etc as required					
10	110mm diameter sleeves including supply and installation	m	100		
11	50mm diameter sleeves for intercom including supply and installation	m	100		
12	32mm diameter sleeves including supply and installation	m	100		
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1	600mm x 600mm x 600mm Manholes complete with heavy covers including supply and installation	No	3
<u>TRENCHING</u>			
<u>Trenching for cables and sleeves including the breaking and fixing of concrete/paving</u>			
2	In soft soil	m3	150
3	In pickable soft rock	m3	100
4	In hard rock	m3	20
5	Backfilling	m3	270
6	Soft bedding in trenches	m3	135
7	Cable marker	No	15
8	Cable warning tape	m	20
9	Remove discarded material from site	m3	100
10	Area lighting poles backfilling and compaction complete with cement mixed in to the backfill soil-bags cement per pole	m3	100

INTERNAL ELECTRICAL INSTALLATION

Complete electrical installation: internal small power and lighting

NOTE: Tenderers are advised to study the specification before pricing the bill. Quantities in the bill of quantities are remeasurable.

SMALL POWER AND LIGHTING

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ELECTRICAL WORK
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

SWITCHED SOCKET OUTLETS

Switched socket outlets and accessories as specified in the specification:

Allowance should be made for the following electrical equipment

16Ampere round 3 pin 250 V grade switched socket outlets complete with cover plates, screws, etc installed in flush draw boxes or power skirting.

600V/1000V grade PVC insulated stranded copper conductor drawn in conduit 4mm sqr PVC conductors and 2.5mm sqr BCEW

Draw boxes, conduits equipped with draw wire placed in position for casting into concrete or screed, for building in or chased concrete into concrete or brickwork and for surface mounted in ceiling voids included dending threading, jointing, short lengths, draw boxes, couplings, bends, tees, and saddles etc as specified:

1	16 Amp single switched socket outlet complete with cover plate for installation in a drawbox, etc including supply and installation	No	6
2	16 Amp single dedicated switched socket outlet complete with cover plate for installation in power skirtings, etc including supply and installation	No	12
3	16 Amp single switched socket outlet complete with cover plate for installation in a drawbox, etc including supply and installation	No	12
4	16 Amp double Nomarl switched socket outlet complete with cover plate for installation in power skirting, etc including supply and installation	No	12
5	16 Amp single dedicated switched socket outlet complete with cover plate for installation in drawbox, etc including supply and installation	No	2
6	4mm sqr PVC insulated conductor including supply and installation	m	600
7	4mm sqr Bare Copper Earth Wire including supply and installation	m	300

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1	6mm sqr PVC insulated conductor including supply and installation	m	100
2	6mm sqr Bare Copper Earth Wire including supply and installation	m	50
3	100mm x 100mm draw box flush mounted complete chased in including supply and installation	No	5
4	100mm x 100mm draw box surface mounted complete installed, including supply and installation	No	22
5	50mm x 100mm draw box surface mounted complete installed, including supply and installation	No	12
6	20mm diameter PVC conduit complete installed with all bends, fixing saddles, adapters, chased into walls, etc. as specified including supply and installation	m	150
7	25mm diameter Steel conduit complete installed with all bends, fixing saddles, adapters, chased into walls, etc. as specified including supply and installation	m	200
8	2 x 4 Data point including supply and installation	No	10
9	2 x 4 Telephone point blank box including supply and installation	No	10
10	Two compartment power skirting including supply and installation	m	200
11	90 degrees bends including supply and installation	No	15
12	End caps including supply and installation	No	25
13	Padestal socket outlet including supply and installation	No	8

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ELECTRICAL WORK
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LIGHT FITTINGS

Luminaries and accessories as specified in the specification

Allowance should be made for the following electrical equipment

Light fittings as specified in the specification - the light fitting specified must comply to the quality specified in the specification.

600V/1000V grade PVC insulated stranded copper conductor drawn in conduit - 2.5mm sqr PVC conductors and 2.5mm sqr BCEW

Draw boxes, conduits equipped with draw wire placed in position for casting into concrete or screed, for building in or chased into concrete or brickwork and for surface mounted in ceiling voids including bending threading, short lengths, draw boxes, couplings, bends, tees and saddles etc as specified:

Installed and mounted to round draw boxes in or ceiling voids or roof trusses including all fixing brackets, supports, connectors, connections complete with lamps

1	Type A light fitting including supply and installation	No	4
2	Type B light fitting including supply and installation	No	74
3	Type C light fitting including supply and installation	No	16
4	Type D light fitting including supply and installation	No	60
5	Type E light fitting including supply and installation	No	12
6	Type F light fitting including supply and installation	No	5
7	Type G light fitting including supply and installation	No	16
8	Type H light fitting including supply and installation	No	6
9	Type I light fitting including supply and installation	No	14
10	2.5mm sqr PVC insulated conductor including supply and installation	m	3 000

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ELECTRICAL WORK

JL DUBE MEMORIAL PROJECT

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1	2.5mm sqr Bare Copper Earth Wire including supply and installation	m	1 500
2	60mm diameter round draw box surface mounted complete installed including supply and installation	No	3 027
3	20mm diameter pvc conduit complete installed with all bends, fixing saddles, adaptors, chased into walls, etc. as specified including supply and installation	No	100
4	16 Ampere photo cell in any empty luminaire as specified including supply and installation	No	3

LIGHT SWITCHES

Light switches and accessories as specified in the specification

Allowance should be made for the following electrical equipment:

16 Ampere 250V grade light switches complete with cover plates, screws etc installed in flush draw box

600V/1000V grade PVC insulated stranded copper conductor drawn in conduit - 2.5mm sqr PVC conductors and 2.5mm sqr BCEW

Draw boxes, conduits equipped with draw wire placed in position for casting into concrete or screed, for building in or chased into concrete or brickwork and for surface mounted in ceiling voids including bending threading, short lengths, draw boxes, couplings, bends, tees and saddles etc as specified:

5	16 Amp single lever one way light switch complete with cover plate installed in draw box, etc including supply and installation	No	8
6	16 Amp single lever two way light switch complete with cover plate installed in draw box, etc including supply and installation	No	2
7	2.5mm sqr PVC insulated Copper Earth Wire including supply and installation	m	600

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ELECTRICAL WORK
JL DUBE MEMORIAL PROJECT
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1	2.5mm sqr Bare Copper Earth Wire including supply and installation	m	300		
2	50mm x 100mm draw box flush mounted complete including supply and installation	No	12		
3	50mm x 100mm draw box surface mounted complete including supply and installation	No	12		
4	Tracing of all existing wire ways, all electrical installation including sleeves			SUM	
5	Stripping of all existing wires and sleeves where neccessary			SUM	
6	20mm diameter steel conduit complete installed with all bends, fixing saddles, adaptors, chased into walls or surface mounted, etc as specified including supply and installation	m	40		
<u>ISOLATORS AND POWER OUTLET POINTS</u>					
Isolators and power outlet points accessories as specified in the specification					
Allowance should be made for the following electrical equipment:					
30 Ampere and 60 Ampere 250V grade isolators complete with cover plates, screws etc installed in flush or surface mounted draw boxes or power skirting.					
600V/1000V grade PVC insulated stranded copper conductors drawn in conduit - PVC conductor and BCEW - current carrying capacity of conductors to be in accordance with SABS 0124					
Draw boxes, conduits equipped with draw wire placed in position for casting into concrete or screed, for building in or chased into concrete or brickwork and for surface mounted in ceiling voids including bending threading, short lengths, draw boxes, couplings, bends, tees and saddles etc as specified:					
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Bill No. 14 ELECTRICAL WORK JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES					

1	20 Ampere 230 V double pole isolator single phase complete with cover plate installed as specified including supply and installation	No	26		
2	4mm sqr PVC insulated conductor including supply and installation	m	1 500		
3	4mm sqr Bare Copper Earth Wire including supply and installation	m	750		
4	100mm x 100mm draw box flush mounted complete chased in, including supply and installation	No	5		
5	100mm x 100mm draw box surface mounted complete installed, including supply and installation	No	22		
6	20mm diameter pvc conduit complete installed with all bends, fixing saddles, adaptors, chased into walls, etc. as specified including supply and installation	m	200		
7	Wall mounted extraction fan 50L/s including supply and installation	No	12		
8	Motion sensor for extraction fan including supply and installation	No	24		
<u>EARTHING AND BONDING</u>					
9	Complete earthing and bonding of all water pipes, waste pipes, steel conduits, or any metal material, etc. as specified			SUM	
10	Electrical earthing installation for the electrical small power and lighting installation			SUM	
<u>TESTING AND COMMISSIONING</u>					
11	Testing and commissioning of the complete electrical installation			SUM	
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AS BUILT DRAWINGS

- 1 Compile a complete set of marked up as build drawings to be submitted in the operating and maintenance manuals

SUM

CERTIFICATE OF COMPLIANCE

- 2 Issuing a certificate of compliance for the complete electrical installation

SUM

CLEAN UP AND RESTORATION OF SITE

- 3 Clean up and restoration of the site after completion and during construction to the satisfaction of the engineer and the client.

SUM

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ELECTRICAL WORK

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Item No		Quantity	Rate	Amount
	<u>BILL 15 : MECHANICAL WORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Ductwork</u>			
	Descriptions of ducts shall be deemed to include stiffeners, jointing materials, sealants, couplers in the running length and access/inspection panels in accordance with the specification			
	<u>Dampers</u>			
	Descriptions of smoke and fire dampers shall be deemed to include fusible links, sleeves, frames, supports and access openings in ducts			
	<u>Air diffusion</u>			
	Descriptions of air terminals, grilles, louvres and the like shall be deemed to include necks, frames, supports and flexible connections			
	<u>Fans</u>			
	Descriptions of fan assemblies shall be deemed to include supports from the structure, flexible or other connections to ductwork, vibration isolation mountings and airtight inspection doors			
	<u>Sound attenuators</u>			
	Descriptions of sound attenuators shall be deemed to include flanged or flexible connections to ducts and supports from the structure			
	<u>Fan coil units, fan air terminals and fan heaters</u>			
	Descriptions of fan coil units, fan air terminals and fan heaters shall be deemed to include connection points for water, air and electrical supply, for air grilles, dust trays, condensate trays and vibration isolation mountings. Flexible ducts, flexible hose and connecting cables for connecting these units to each other or to water pipe, and electrical supply are separately measured			
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Major equipment

Descriptions of major equipment such as chillers, air handling units and the like shall be deemed to include connections to water, air and electrical supply and/or discharge points, supports, bearers, vibration insulation mountings, filters, insulation, inspection ladders and gangways, access doors and panels and painting etc as specified

Piping

Pipe diameters are nominal internal unless otherwise stated

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch diameter is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all diameters are given and no claim for extra bushes, reducers, etc will be entertained

Fixing of pipes

Unless otherwise stated, descriptions of pipes shall be deemed to include fixing to walls etc, casting in, building in or suspending not exceeding 1m below suspension level

Pump sets

Descriptions of pumps shall be deemed to include connections to water and electrical supply and/or discharge points, vibration insulation mountings, insulation, drip trays with outlets, pressure gauges, etc

Valves

Descriptions of valves shall be deemed to include flanged or screwed connections to pipes, reducers, supports, etc

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Insulation

Descriptions of insulation shall be deemed to include priming the pipes with zinc chromate primer before the insulation is applied, painting the insulation when completed and applying vapour barrier where specified

Mechanical extract fans

- 1 EAF-300mm dia in-line tube fan, duty @ 250pa, 867L/s air flow, 1440rpm max and complete with a speed controller and 1.5D 2-off matching POD sound attenuators.

No 2

Un-insulated ducting

- 2 830 x 830mm
3 300mm diameter
4 200mm diameter
5 300mm dia x 200mm long flexible connection between fan sound attenuator and ducting including fasteners

m 1
m 16
m 8
m 4

Transformation piece

- 6 300mm dia to 200mm dia, 600mm long

m 3

90 degree double sided bends

- 7 300mm dia double sided, 150mm long

m 2

Un-insulated flexible duct

- 8 150mm diameter

m 40

Supply and install duct spigots

- 9 150mm dia duct spigots
10 DV-150mm dia extract disc valves
11 WL-830 x 830 weather louvre c/w plenum box & W.M.S
12 830 x 830 x 48mm washable filter

No 23
No 23
No 2
No 2

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Domestic cold water piping**Class 2 copper pipe: (surface mounted)**

Class 2 copper water piping in accordance with SANS 460 installed complete with short lengths, cutting, plain couplings, capillary solder and jointing strictly in accordance with the manufacturer's instructions, support brackets etc.

1	Dia 35	m	20
2	Dia 22	m	30
3	Dia 15	m	60

Class 2 copper pipe: (chased in walls)

Class 2 copper water piping in accordance with SANS 460 installed complete with short lengths, cutting, plain couplings, capillary solder and jointing strictly in accordance with the manufacturer's instructions, support brackets etc.

4	Dia 35	m	2
5	Dia 22	m	80
6	Dia 15	m	30

Class 2 copper pipe: (installed underground)

Class 2 copper water piping in accordance with SANS 460 installed complete with short lengths, cutting, plain couplings, capillary solder and jointing strictly in accordance with the manufacturer's instructions, support brackets etc.

7	Dia 35	m	1
8	Dia 28	m	1
9	Dia 22	m	1

Bends

Carried to Collection

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	<u>Extra over copper piping for capillary fittings in accordance with SANS 1067- 2 complete with hangers, brackets, soldering, etc</u>				
1	Dia 35	No	5		
2	Dia 22	No	15		
3	Dia 15	No	15		
	<u>Tees</u>				
	<u>Extra over copper piping for capillary fittings in accordance with SANS - 2 complete with hangers, brackets, soldering, etc</u>				
4	Dia 22-22-35	No	1		
5	Dia 22-22-15	No	56		
6	Dia 15-15-15	No	5		
	<u>Reducers</u>				
	<u>Extra over copper piping for capillary fittings in accordance with SANS - 2 complete with hangers, brackets, soldering, etc</u>				
7	Dia 35-22	No	21		
8	Dia 28-22	No	1		
9	Dia 22-15	No			
	<u>Isolating valves</u>				
	<u>Ball type isolating valve complete with couplings to piping, etc, all strictly in accordance with manufacturer's instructions and complying to SANS 1056-3</u>				
10	Dia 35	No	1		
11	Dia 22	No	2		
12	Dia 15	No	55		
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Bill No. 15

MECHANICAL WORK

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Bill No. 15
MECHANICAL WORK
**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

Preparing and applying one coat professional
plaster primer (PP700) and two coats 'Plascon
Velvagio Water Based' paint

1 On walls

m2

1 620

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Bill No. 16
PAINTWORK
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

Bill No. 16

PAINTWORK

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Bill No. 16

PAINTWORK

**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<u>BILL 17 : PROVISIONAL SUMS</u>			
	<u>NOTE:</u>			
	Tenderers are advised to refer to Bill 1 - Preliminaries before pricing this bill and advise all possible nominated/selected subcontractors to the special conditions stipulated under the specific clauses			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>General</u>			
	Work for which budgetary allowances are provided will be measured and valued in accordance with clause 32 of the Principal Building Agreement and deducted in whole or in part if not required without any compensation for loss or profit on the said allowances			
	Unless otherwise described, all prime cost amounts and provisional sums shall be net. No provision for 5 percent cash discount shall be included for the main contractor			
	Prime cost amounts and provisional sums exclude value added tax			
	In the event of a prime cost amount or provisional sum being omitted the items 'Allow for profit' and 'Allow for attendance ...' applicable shall be omitted together with the prime cost amount or provisional sum and no claim whatsoever will be entertained in this regard			
	The principle agent shall be entitled to nominate or select any further specialists and other to execute work or supply and fix any goods whether or not a provisional sum is included in the bills of quantities and such specialists and other will then be deemed to be 'selected subcontractors' as the case may be			
	<u>Profit</u>			
	Where profit stated, the contractor may allow for profit if required			
	Carried to Collection		R	
	Bill No. 17 PROVISIONAL SUMS JL DUBE MEMORIAL PROJECT PROVISIONAL BILLS OF QUANTITIES			

Attendance upon nominated/selected subcontractors

The item 'Allow for attendance.....' which follows each provisional sum for nominated/selected subcontractors' work, shall be deemed to cover all the contractor's costs incurred in providing free of charge to the subcontractor the service as set out in clause B9 of the preliminaries

Taking delivery

Taking delivery of goods or articles by the contractor on site shall mean getting in, unpacking, checking that the quantity is correct and that the goods are complete and undamaged submitting a report thereof to the interested parties and issuing vouchers for the receipt of such goods. The contractor is to store the goods and will be held responsible for the safety thereof and indemnify the employer against any damage or loss which may occur

Work executed under a separate/direct contract

The contractor shall permit access to the site and to the places where the work is to be carried out and provide every facility to enable the specialist to carry out his work in a workmanlike manner and in proper order and sequence

Co-ordination

The contractor shall obtain all necessary particulars of subcontractors and nominated/selected subcontractors' work timeously and the contractor will be responsible for the programming and co-ordination of the works

Number of nominated/selected subcontractors

The contractor's attention is drawn to the fact that the indicated individual provisional sums may consist of numerous specialists, all of which will become nominated/selected subcontractors. The contractor must therefore allow in his tender for any cost implication this may bring about, as no claims in this regard will be entertained

Carried to Collection

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Bill No. 17
PROVISIONAL SUMS
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

EARTHING

- 1 Provide for earthing, etc including, supply, installation, commissioning, etc complete
- 2 Allow for profit
- 3 Allow for attendance and making good in all trades

Item
Item
Item

80 000,00

ESKOM CONNECTION

- 4 Provide for eskom connection, etc including, supply, installation, commissioning, etc complete
- 5 Allow for profit
- 6 Allow for attendance and making good in all trades

Item
Item
Item

300 000,00

LIGHTWEIGHT STEEL CLADDING

- 7 Provide for lightweight steel cladding including supply and installation, etc complete
- 8 Allow for profit
- 9 Allow for attendance and making good in all trades

Item
Item
Item

250 000,00

PLUMBING AND DRAINAGE COMMISSIONING

- 10 Provide for plumbing and drainage commissioning, etc complete
- 11 Allow for profit
- 12 Allow for attendance and making good in all trades

Item
Item
Item

100 000,00

IRONMONGERY

- 13 Provide for supplying and executing the entire ironmongery installation, etc. complete
- 14 Allow for profit
- 15 Allow for attendance and making good in all trades

Item
Item
Item

15 000,00

Carried to Collection

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Bill No. 17
PROVISIONAL SUMS
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

SIGNAGE

- 1 Provide for signage installation, etc including, supply, installation, commissioning, etc complete
- 2 Allow for profit
- 3 Allow for attendance and making good in all trades

Item
Item
Item

30 000,00

LANDSCAPING

- 4 Provide for landscaping, etc including, supply, installation, commissioning, etc complete
- 5 Allow for profit
- 6 Allow for attendance and making good in all trades

Item
Item
Item

100 000,00

Carried to Collection

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Bill No. 17
PROVISIONAL SUMS
JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES

Bill No. 17

PROVISIONAL SUMS

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Bill No. 17
PROVISIONAL SUMS
**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

CONTINGENCY

Allow a contingency amount to be used as directed by the Architect, or deducted in whole or in part, if not required

Carried Forward**JL DUBE MEMORIAL PROJECT
PROVISIONAL BILLS OF QUANTITIES**

PART C3: SCOPE OF WORK**C3.1 PROJECT DESCRIPTION AND SCOPE OF CONTRACT****C3.2 PROJECT SPECIFICATIONS****C3.3 STANDARD SPECIFICATIONS**

C3.3.1 Listing of the Standard Specifications

C3.3.2 Amendments to the Standard Specifications

C3.4 PARTICULAR SPECIFICATIONS

C3.4.1 Part AH - OHS 1993 Safety Specification (2014)

C3.4.2 Standard Environmental Management Plan
for Civil Engineering Construction Works

C3.5 CONTRACT AND STANDARD DRAWINGS

C3.5.1 Contract Drawings / Details

C3.5.2 Standard Drawings

C3.6 ANNEXURES

C3.1: PROJECT DESCRIPTION AND SCOPE OF CONTRACT

C3.1.1 Description of Works

Experienced and Qualified Contractors are invited to tender for the Completion of Dr J.L. Dube Memorial Project Amphitheatre in Inanda Township, eThekweni Local Municipality, KwaZulu Natal Province.

The objective of this tender is to select the qualified construction service providers to be considered for the Completion of Dr J.L. Dube Memorial Project Amphitheatre in Inanda Township, eThekweni Local Municipality, KwaZulu Natal Province.

The scope of services for which this EOI is applicable, but not necessarily exclusive to, is for the completion of the construction of the following structures and related services:

- ☐ Steel sheeting roof coverings,
- ☐ Structural steelwork,
- ☐ Electrical, mechanical & wet services final fix,
- ☐ Repair ablutions,
- ☐ Final coat painting to ablution area,
- ☐ Floor finish installation,
- ☐ Repairs to seating area.
- ☐ Casting concrete piling for roof columns
- ☐ Demolishing existing columns
- ☐ Rebuilding ramps and stairs including new handrails,
- ☐ Access driveway,
- ☐ Parking area repairs and markings
- ☐ Landscaping

C3.2: PROJECT SPECIFICATION

PREAMBLE

In the event of any discrepancy between a part or parts of the Standard or 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 Employer's Agent before the execution of the work under the relevant item.

C3.2.1 GENERAL

PS.1 PROGRAMME, METHOD OF WORK, AND ACCOMMODATION OF TRAFFIC

This Clause is to be read in conjunction with the provisions and obligations as contained in SANS 1921-1 and SANS 1921-2.

PS.1.1 Preliminary Programme

The Contractor shall include with his tender a preliminary programme on the prescribed form (see Part T2.2: Preliminary Programme) to be completed by all Tenderers. The programme shall be in the form of a simplified bar chart with sufficient details to show clearly how the works will be performed within the time for completion as stated in the Contract Data.

Tenderers may submit tenders for an alternative Time for Completion in addition to a tender based on the specified Time for Completion. Each such alternative tender shall include a preliminary programme similar to the programme above for the execution of the works, and shall motivate his proposal clearly by stating all the financial implications of the alternative completion time.

The Contractor shall be deemed to have allowed fully in his tendered rates and prices as well as in his programme for all possible delays due to normal adverse weather conditions (refer to Clause 5.12.2.2) and special non-working days (refer to Clause 5.1.1.1) as specified in the in the Contract Data.

PS.1.2 Programme in Terms of Contract

It is essential that the construction programme, which shall conform in all respects to Clause 12.2.6 of JBCC , be furnished within the time stated in the Contract Data.

The preliminary programme to be submitted with the tender shall be used as basis for this programme.

The Tenderer's attention is drawn to the fact that a number of factors will affect the programming of and method of carrying out the works. The more important of these are:

- (1) Time required for service relocations.
- (2) Time allowances to be made for the ordering of special items.
- (3) Notification required by service organisations.
- (4) Any special sequence in which work must be carried out. Must certain areas of work be

- finished before work commences on others?
- (5) If delays are anticipated with service relocations the contractor should be asked to allow time.
 - (6) Is work required out of normal hours? (eg. to accesses).
 - (7) Vehicular access to private property is to be maintained.
 - (8) Traffic restrictions.

Those known, existing services in the area of the works have been depicted on the contract drawings. It is evident, however, that the status of existing service records as far as can be ascertained might not reflect the actual situation in the field. As such, due allowance has been made in the Bill of Quantities for the proving of services where directed by the Engineer.

PS.1.3 Requirements for Accommodation of Traffic

PS.1.3.1 General

Accommodation of traffic, where applicable, shall comply with SANS 1921-2: 2004: Construction and Management Requirements for Works Contracts, Part 2: Accommodation of Traffic on Public Roads occupied by the Contractor. The Contractor shall obtain this specification from Standards South Africa if accommodation of traffic will be involved on any part of the construction works.

Clause 4.10.4 of SANS 1921-2: 2004 shall be replaced with the following:

“Road signs and markings shall comply with the requirements of “The South African Road Traffic Signs Manual - Volume 2: Roadworks Signing”.

PS.1.3.2 Basic Requirements

The travelling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.

The Contractor shall ensure that all road signs, barricades, delineators, flagmen and speed controls are effective and that courtesy is extended to the public at all times.

Failure to maintain road signs, warning signs or flicker lights, etc, in a good condition shall constitute ample reason for the Employer's Agent to suspend the work until the road signs, etc, have been repaired to his satisfaction.

The Contractor may not commence constructional activities affecting existing roads before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual.

The Contractor shall construct and maintain all temporary drainage works necessary for temporary deviations. The Contractor shall ensure that the existing property accesses are maintained at all times. Where necessary the Contractor shall make allowance in the rates for completing the work required to the accesses out of normal hours.

PS.1.3.3 Traffic Safety Officer

Where warranted by traffic conditions on or near the site, the Contractor shall nominate a suitable

member of his staff as traffic safety officer to be responsible for the arrangement and maintenance of all the measures for the accommodation of traffic for the duration of the project. Duties of the traffic safety officer shall be in compliance with the Occupational Health and Safety Act 1993 and the Construction Regulations 2014.

PS.1.3.4 Payment

The Contractor's tendered rates for the relevant items in the Bill of Quantities shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered.

PS.1.3.5 Pedestrian movement

The Contractor shall make provision for accommodating all pedestrian movements in the area of the works. Allowance shall be made in the relevant rates for any barricades and signs required.

PS.1.3.6 Temporary Reinstatement

Provided always that if in the course or for the purpose of the execution of the works or any part thereof any road or way shall have been broken up, then notwithstanding anything herein contained:

- (a) if the permanent reinstatement of such road or way is to be carried out by the appropriate authority or by some person other than the contractor (or any subcontractor to him), the contractor shall at his own cost and independently of any requirement of or notice from the Engineer be responsible for the making good of any subsidence or shrinkage or other defect, imperfection or fault in the temporary reinstatement of such road or way, and for the execution of any necessary repair or amendment thereof from whatever cause the necessity arises, until the end of the period of maintenance in respect of works beneath such road or way until the authority or other person as aforesaid shall have taken possession of the site for the purpose of carrying out permanent reinstatement (whichever is the earlier), and shall indemnify and save harmless that Council against and from any damage or injury to the Council or to third parties arising out of or in consequence of any neglect or failure of the Contractor to comply with the foregoing obligations or any of them and against and from all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto.
- (b) where the authority or person as aforesaid shall take possession of the site as aforesaid in sections or lengths, the responsibility of the contractor under paragraph (a) of this sub-clause shall cease in regard to any such section or length at the time possession thereof is so taken, but shall during the continuance of the said period of maintenance continue in regard to any length of which possession has not been taken and the indemnity given by the contractor under the said paragraph shall be construed and have effect accordingly.

PS.2 SERVICES

This Clause is to be read in conjunction with the provisions and obligations as contained in SANS 1921-1 and SANS 1921-2.

PS.2.1 Existing Services

The Tenderer's attention is drawn to the numerous existing services in the area. Although every effort has been made to depict these services accurately the positions shown must be regarded as approximate.

PS.2.2 Proving Underground Services

This clause must be read in conjunction with Clause DB.5.1.2, the requirements of which shall be extended to cover all earthworks operations whether for trenching or bulk earthworks, in the vicinity of underground services.

It is stressed that all services in a particular area must be proven before commencing work in that area.

Insofar as bulk earthworks are concerned, where services are indicated on the drawings or where from site observations can reasonably be expected that such services are likely to exist where excavations are to take place, the Contractor shall without instructions from the Employer's Agent carefully excavate by hand to expose and prove their positions.

The cost of the proving trenches is to be included in the work covered by Clause DA.8.3.

When a service is not located in its expected position the Contractor shall immediately report such circumstances to the Employer's Agent who will decide what further searching or other necessary action is to be carried out and shall instruct the Contractor accordingly. The cost of this additional searching shall be to the Council's cost and shall be paid for under DB.8.19 - Proving Existing Services.

Should any service be damaged by the Contractor in carrying out the works and should it be found that the procedure as laid down in this clause has not been followed then all costs in connection with the repair of the service will be to the Contractor's account.

When electrical cables are not in the positions shown on drawings of eThekweni Electricity and cannot be found after proving trenches have been put down, assistance may be obtained by calling an official of the Works Branch on Telephone No. 311-1111 during office hours, or by contacting Control on Telephone No. 305-7171 after hours.

It should be noted that 33,000 Volt and 132,000 Volt cables may only be exposed by the eThekweni Electricity's personnel. The cables are usually protected by concrete covering slabs, and therefore if the slabs are inadvertently exposed, excavation work must stop, and the eThekweni Electricity shall be contacted immediately on the above telephone numbers.

Proving of services shall be completed at least two weeks in advance of the actual programmed date for commencing work in the area. The position of these services located must be co-ordinated and levelled by the Contractor, and the information given in writing to the Employer's Agent's Representative.

The requirements of this clause do not relieve the Contractor of any obligations as detailed in the Conditions of Contract or under Clause 4.17 of SANS 1921-1.

PS.2.3 New Services and Relocation of Existing

This clause shall be read in conjunction with Clause PS.1.

New services are either to be installed by the Contractor as part of the contract or by others during the contract period. In the latter case excavation and subsequent backfilling of the trench from the top of the bedding layer shall generally be carried out by the Contractor.

Relocation of services shall generally be carried out by the relevant services organisation. Generally their work shall include the excavating and bedding the service which will include backfilling to a depth of approximately 300 mm above the service. The remainder of the backfilling shall be carried out by the Contractor.

Generally work shall only commence on the installation of new services once the bulk earthworks have been completed and roughly trimmed to level along a substantial portion of the services route. In addition no sidewalk, verge, median or island shall be surfaced or topsoiled until all work on the services has been completed.

Services affected by the contract are described as follows:

- PS.4: Watermains;
- PS.5: Sewers;
- PS.6: Stormwater;
- PS.7: Electrical Cables / Lighting;
- PS.8: Telkom / Neotel;
- PS.9: CCTV;

Further to the above, tenderers are referred to the services drawing and are to note that several minor cables / pipes may be encountered during excavation works which may require to be relocated to some extent. It is anticipated that the two-week period required under PS.2.2 will allow sufficient time for these relocations.

PS.2.4 Accommodation of Services

Further to Clauses PS.1 and PS.2 of this specification, tenderers are to note that allowance must be made under this item and / or the appropriate rates, for all costs incurred as a result of complying with these clauses. It shall also cover liaison with the services organisations and accommodation of their work gangs / contractors on site.

PS.3 WATERMAINS**PS.3.1 General****PS.3.2 Water Main Valve Access**

Due to the dangerous situation occurring when water main valves are covered over, the Contractor shall maintain access to all water main valves at all times. During asphalt layer work, after each pass by the paving machine, the valves shall be exposed and access maintained in a safe condition.

Whatever method the Contractor chooses to use for this work, the cost of raising the valves from existing level to ultimate level shall be paid only once, irrespective of the number of times the valve is uncovered. Spacer rings required for the height adjustment of valve covers shall be supplied by the Water and Sanitation Unit. Tolerances on valve cover levels shall be as specified in clause PH.6.5. Before final setting in position of valve covers the Contractor shall liaise with the Employer's Agent regarding the direction in which covers shall be placed.

PS.3.3 Restriction on Compactive Equipment

The Contractor is to note that existing watermains traverse the site of the works and special care is to be taken in close proximity to these mains and connections. The existing mains and connections shall be proved on site by the Contractor prior to any construction work commencing in the vicinity of the watermains.

Under no circumstances will heavy road-making equipment, other heavy plant or vibratory compaction equipment be permitted to operate within 800 mm vertically or horizontally of the existing mains or connections. The permissible compaction plant within this restricted area shall be the equivalent of a "Bomag 90" under static compaction, or similar approved plant. When the roadworks are far enough advanced to provide a minimum of 800 mm cover to the existing mains, the above restriction will fall away.

The Contractor is to take cognisance of the above requirements when entering rates in the Bill of Quantities and in the programming of the works. No claim for additional payment based on the inability to use plant as a result of the requirements of this clause will be accepted. The Contractor will be held liable for any costs should the watermain or electrical cables be damaged during construction of the road.

PS.4 SEWERS

PS.4.1 Blockage of Foul Water Sewers

The Contractor shall be responsible for ensuring that cementitious sludge, sand and rubble from the works do not enter the foul water reticulation system. The Contractor shall be liable for any costs incurred by the Council or others as a result of blockages in the reticulation system attributed to failure to comply with the above requirement.

PS.5 STORMWATER

PS.5.1 Blockage Stormwater Sewers

The Contractor shall be responsible for ensuring that cementitious sludge, sand and rubble from the works do not enter the stormwater reticulation system. The Contractor shall be liable for any costs incurred by the Council or others as a result of blockages in the reticulation system attributed to failure to comply with the above requirement.

PS.6 ELECTRICAL PLANT

PS.6.1 General

Various types of electrical cables including high voltage, low voltage, street lighting and domestic connection cables are affected by the contract. The laying, relocation and jointing of all cables

will be carried out by eThekwini Electricity's work gangs, or agents appointed by them, whilst the excavation and backfilling forms part of this contract. Close liaison will therefore be necessary with eThekwini Electricity throughout the contract.

PS.6.2 Street Lighting

The existing lighting will be removed in stages and replaced in the centre median / intersection corners. Relocation will take place during this contract and be executed by eThekwini Electricity or their agents. It is a requirement that the street lighting be operational at all times.

PS.6.3 MV / LV Cables

Certain MV / LV cables are to be replaced within the contract area. The actual cable work associated with this relocation and / or replacement of these cables will be carried out by eThekwini Electricity and it is stressed that the two week period referred to in Clause PS.2 is the minimum period required to enable eThekwini Electricity to be on site timeously.

PS.6.4 Relocation of Existing Services

Should it be necessary to adjust the line, level and / or position of any service not catered for in the contract to enable the construction to proceed the Contractor shall on no account effect such adjustment himself but shall notify the Engineer who will arrange for the work to be carried out at no cost to the Contractor.

PS.7 TELKOM S.A. LIMITED / NEOTEL PLANT

[No work to Telkom / Neotel Plant is envisaged, but the tenderers attention is drawn to the fact that Telkom / Neotel copper cables and fibre optic cables may be existing in the contract area.]

PS.8 CCTV PLANT

[No work to CCTV Plant is envisaged, but the tenderers attention is drawn to the fact that CCTV cables and fibre optic cables maybe existing in the contract area.]

PS.9 MANAGEMENT OF THE ENVIRONMENT

The Contractor shall pay special attention to the following:

PS.9.1 Natural Vegetation

The Contractor shall confine his operation to as small an area of the site as may be practical for the purpose of constructing the works.

Only those trees and shrubs directly affected by the works and such others as the Employer's Agent may direct in writing shall be cut down and stumped. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work or where directed by the Engineer.

PS.9.2 Fires

The Contractor shall comply with the statutory and local fire regulations. He shall also take all

necessary precautions to prevent any fires. In the event of fire the Contractor shall take active steps to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires which may have been caused by him or his employees.

PS.9.3 Environmental Management Plan

In addition to the above, all requirements according to the Environmental Management Plan as detailed in C3.4: Particular Specifications, will be adhered to.

PS.10 OCCUPATIONAL HEALTH AND SAFETY

PS.10.1 General Statement

When considering the safety on site the Contractor's attention is drawn to the following:

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the OHS Act 1993 Construction Regulations 2014 issued on 7 February 2014 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of Section 37(2) of the Occupational Health and Safety Act.

PS.10.2 Health and Safety Specifications and Plans to be submitted at tender stage

PS.10.2.1 Employer's Health and Safety Specification

The Employer's Health and Safety Specification is included in Part C3.4: Particular Specifications.

PS.10.2.2 Tenderer's Health and Safety Plan

At tender stage only a brief overview of the tenderers perception on the safety requirements for this contract will be adequate. This will be attached to Part T2.2: Contractor's Health and Safety Plan.

Only the successful Tenderer shall submit a separate Health and Safety Plan as required in terms of Regulation 7 of the Occupational Health and Safety Act 1993 Construction Regulations 2014, and referred to in Part T2.2: Contractor's Health and Safety Plan.

The detailed safety plan will take into consideration the site-specific risks as mentioned under PS.10.1 and must cover at least the following:

- (i) A proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 9 to 29;
- (ii) Pro-active identification of potential hazards and unsafe working conditions;
- (iii) Provision of a safe working environment and equipment;

- (iv) Statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (*Regulation 7*);
- (v) Monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;
- (vi) Details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 8 and other applicable regulations; and
- (vii) Details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2014.

The Contractor's Health and Safety Plan will be subject to approval by the Employer, or amendment if necessary, before commencement of construction work. The Contractor will not be allowed to commence work, or his work will be suspended if he had already commenced work before he has obtained the Employer's written approval of his Health and Safety Plan.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval for his safety plan, shall not be used as a reason to claim for extension of time or standing time and related costs

A generic plan will not be acceptable.

PS.10.3 Cost of compliance with the OHSA Construction Regulations

The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract. Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

Items that may qualify for remuneration will be specified in the Employer's Health and Safety Specification.

PS.11 SITE SECURITY

The Contractor shall, for the duration of the contract, provide sufficient security and watchmen to adequately ensure the safety and protection of the works, the Contractor's staff, including local labour and subcontractors, and all site plant and construction equipment required for the works.

Site Security, in conjunction with the SAPS (where necessary), shall be responsible for removal of disruptive elements, that may interrupt the progress of the contract through acts such as, but not limited to, intimidation, threats of disruption, violent disruption, or criminal and illegal activity by the local community or independent organisations or entities that may result in slowing down or partial or total stoppage of the works.

PS.12 PERFORMANCE MONITORING OF SERVICE PROVIDERS

The performance of service providers that have been selected to provide assistance in the provision of a municipal service, otherwise than in circumstances where Chapter 8 of the Municipal Systems Act applies, is required, by Section 116 of the Municipal Finance Management Act, to be monitored and reported on (see Cl.53 of the SCM Policy).

Appropriate key performance indicators (KPIs) for the contract must be set by the Municipality as a yardstick for measuring performance.

C3.3: STANDARD SPECIFICATIONS

C3.3.1 The Specifications on which this contract is based are the Standard Engineering Specifications (hereafter referred to as the Standard Engineering Specifications). This document is obtainable separately, and Tenderers shall obtain their own copies of the applicable Sections.

Part	Description	Date of Issue	
AB	General Specifications	July	1992
B	Site Clearance	March	1990
C	Concrete Work	February	1987
DA	Earthworks: Bulk	January	1985
DB	Earthworks for Pipe Trenches	July	1992
DC	Earthworks for Concrete Lined Canals		
DD	Earthworks for Structures		
EA	Lime Stabilisation		
EB	Graded Crushed Stone	December	1988
EC	Cement Treated Graded Crushed Stone	December	1988
ED	Road Asphalt	July	1992
EE	Pre-coated Stone Chippings		
EF	Kerbs and Haunches	July	1992
EG	Sidewalks, Footpaths and Median Areas	July	1992
EH	Steel Guardrails & Conc. Median Barriers		
EJ	Concrete Interlocking Block Surfaces		
EK	Waterbound Macadam Base		
EL	Dumprock Subgrade Improvement		
EM	Concrete Surface to Roads		
EN	Slurry Sealing		
EP	Single Seal Surface Treatment		
F	Protection Works	July	1992
G	Pre-stressing		
H	Reinforced Earth		
J	Piling		
K	Bearings		
L	Structural Work		
PB	Pavement Layers of Gravel Material		
PC	Stabilisation of Gravel Base		
PD	Surface Treatment: Modified Binder		
PE	Pressure Pipelines: Steel		
PF	Pressure Pipelines: Other Than Steel		
PG	Non Pressure Pipelines and Pc Culverts	July	1992
PH	Manholes and Appurtenant Drainage Works	July	1992
PJ	Pipe Jacking		
PG	Lateral Support Systems		
PS	Pump Stations: Sewage		
S	Reinstatement	March	1993
TA	Road Signs	October	1989
TB	Road Markings	October	1989

C3.3.2 AMENDMENTS TO THE STANDARD SPECIFICATIONS

INTRODUCTION

In certain clauses the standard, standardized and particular specifications allow a choice to be specified in the project specifications between alternative materials or methods of construction and for additional requirements to be specified to suit a particular contract. Details of such alternative or additional requirements applicable to this contract are contained in this part of the project specifications. It also contains additional specifications required for this particular contract.

The number of each clause and each payment item in this part of the project specifications consists of the prefix PS followed by a number corresponding to the number of the relevant clause or payment item in the standard specifications. The number of a new clause or payment item, which does not form part of a clause or a payment item in the standard specifications and which is included here, is also prefixed by PS, but followed by a new number which follows on the last clause or item number used in the relevant section of the standard specifications.

PS AB	General Specifications
PS B	Site Clearance
PS C	Concrete Work
PS DA	Earthworks: Bulk
PS DB	Earthworks for Pipe Trenches
PS DC	Earthworks for Concrete Lined Canals
PS DD	Earthworks for Structures
PS EA	Lime Stabilisation
PS EB	Graded Crushed Stone
PS EC	Cement Treated Graded Crushed Stone
PS ED	Road Asphalt
PS EE	Pre-coated Stone Chippings
PS EF	Kerbs and Haunches
PS EG	Sidewalks, Footpaths and Median Areas
PS EH	Steel Guardrails & Conc. Median Barriers
PS EJ	Concrete Interlocking Block Surfaces
PS EK	Waterbound Macadam Base
PS EL	Dumprock Subgrade Improvement
PS EM	Concrete Surface to Roads
PS EN	Slurry Sealing
PS EP	Single Seal Surface Treatment
PS F	Protection Works
PS G	Pre-stressing
PS H	Reinforced Earth
PS J	Piling
PS K	Bearings
PS L	Structural Work
PS PB	Pavement Layers of Gravel Material

PS PC	Stabilisation of Gravel Base
PS PD	Surface Treatment: Modified Binder
PS PE	Pressure Pipelines: Steel
PS PF	Pressure Pipelines: other than Steel
PS PG	Non Pressure Pipelines and Pc Culverts
PS PH	Manholes and Appurtenant Drainage Works
PS PJ	Pipe Jacking
PS PG	Lateral Support Systems
PS PS	Pump Stations: Sewage
PS S	Reinstatement
PS TA	Road Signs
PS TB	Road Markings

C3.4: PARTICULAR SPECIFICATIONS

In addition to the Standardized and Project Specifications the following Particular Specifications / Policies shall apply to this contract and are available on web address:

<ftp://ftp.durban.gov.za/cesu/StdContractDocs/>:

C3.4.1 Part AH - OHSA 1993 Safety Specification
(51 Pages)

DEPARTMENT OF ARTS AND CULTURE: COMPLETION OF DR JL DUBE MEMORIAL SITE AMPHITHEATER, INANDA, ETHEKWINI LOCAL MUNICIPALITY, KWAZULU NATAL

OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

AUGUST 2020

ISSUED BY:

RISIMATI CONSULTING ENGINEERS

PO BOX 40092

MORELETA PARK

0044

CONTACT PERSON

Mr. B. Maseko

Tel: (012) 998 1054

The appointed Construction Health and Safety Agent is responsible for the preparation and revision of this specification.

A controlled electronic “read only” version will be provided to all potential suppliers and contractors at tender stage. Suppliers, service providers and contractors must make provision in their planning and costing to meet full compliance to this specification. Any electronic copies or hardcopy printouts made from this controlled version are considered to be “Uncontrolled”.

The Appointed Construction Health and Safety Agent will issue revisions to the specification as necessary. Any changes to an individual section will cause the entire specification to be revised and re-issued.

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1. General

1.1 Purpose

This specification identifies the working behaviours and safe work practices that are expected of all employees, principal contractors (including subcontractors), suppliers, service providers and visitors engaged in activities associated with the Completion of Dr JL Dube Memorial site Amphitheater, Inanda, eThekwin Local Municipality, KwaZulu Natal (VSB-1160-A). This document provides the standards against which compliance will be measured. It has been derived from leading health and safety practices as well as legislative requirements.

1.2 Scope

The occupational health and safety requirements specified in this document apply to all project construction activities forming part of the Completion of Dr JL Dube Memorial site Amphitheater, Inanda, eThekwin Local Municipality, KwaZulu Natal (VSB-1160-A)

All contractors, suppliers and service providers are required to read, understand and take note of these requirements and must ensure that these requirements have been taken into consideration and completely integrated with the project specific Occupational Health and Safety Management Plan and other project areas such as scheduling, resourcing and costing.

Note: This summary document was compiled to cover all possible construction activities. Each contractor is expected to conduct a project-specific risk assessment based on his scope of work in order to determine the specific requirements that would be applicable to his work and which must be addressed in his Health and Safety Management Plan.

The requirements specified in this document are applicable to the contractor as well as any sub-contractors that may be appointed by the contractor. It is the contractor's responsibility to ensure that his sub-contractors comply fully with all legal requirements as well as the requirements of this specification.

Note: This document will be updated from time to time to include:

- Changes in legislation
- Client requirements
- Project or site-specific hazards identified during risk assessments or through analysing incident trends; and
- Lessons learnt from incidents.

1.3 Definitions

All Injuries – The sum of Lost Time Injuries and Medical Treatment Cases.

Barricade – A temporary structure that is erected as a physical barrier to prevent personnel from coming into contact with an identified hazard.

Bund – An impervious containment structure around and beneath a hydrocarbon / chemical storage facility, isolating the facility from ground and surface water reticulation. Bunds are designed to contain spillages and leaks, and to facilitate clean-up operations, thus preventing pollution of the surrounding environment.

Client – A nominated and appointed representative of the Department of Public Works.

Construction Health And Safety Agent (Pr CHSA) – A person legally appointed by the Client with the requisite competencies and registrations to act as his or her representative.

Contractor – A person or organisation providing construction work to the Principal Contractor at a project site in accordance with agreed scope of work/services, specifications, terms and conditions.

Employee – Any person who is employed or works for an employer.

Employer – Any person who employs or provides work for any person.



First Aid Case (FAC) – This is limited to one time treatment and subsequent observation and involves treatment for only minor injuries (not emergency treatment of serious injuries). The professional status of the person providing the treatment does not have any effect on the classification of first aid or medical treatment. However, the severity of the injury does.

First aid treatments, following an incident, include only the following procedures, anything else would be classified as medical treatment:

1. Using non-prescription medication at non-prescription doses.
2. Administering immunisations (such as tetanus, Hepatitis B vaccine or rabies vaccine) given as a precaution for an injury requiring no further treatment.
3. Cleaning, flushing or soaking wounds on the surface of the skin.
4. Using wound coverings such as bandages, Band-Aids, gauze pads, etc., or using butterfly bandages or Steri-Strips.
5. Using hot or cold therapy.
6. Using any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.
7. Using temporary immobilisation devices while transporting an accident victim (e.g. splints, slings, neck collars, back boards, etc.)
8. Drilling of a fingernail or toenail to relieve pressure, or draining fluid from a blister.
9. Using eye patches.
10. Removing foreign bodies from the eye using only irrigation.
11. Removing splinters or foreign material from areas other than the eye by irrigation., tweezers, cotton swabs or other simple means.
12. Using finger guards.
13. Using massages; and
14. Drinking fluids for relief of heat stress.

Hazardous Chemical Substance – Any substance or material (solid, liquid or gas) that can harm a person's health, start a fire, explode or cause environmental damage.

Incident – An event (or a continuous / repetitive series of events) that results or has the potential to result in a negative impact on people (employees, contractors and visitors), the environment, operational integrity, assets, community, process, product, legal liability and / or reputation.

Isolation and Lockout Procedure – A site or equipment-specific procedure that describes the method, and sequence to be followed, for rendering equipment, plant and systems safe to work on.

Isolation Bar – A device used at a Lockout Station to which anyone is able to attach a Personal Lock making it impossible for an Isolation Officer to remove the key to the Equipment Locks, thus preventing the de-isolation of a system, plant or equipment while it is still being worked on. A Discipline Lock must always be the first lock attached to an Isolation Bar and last to be removed.

Isolation Officer – A person who has been authorised (in writing) by the nominated project management representative to perform isolation / lockout procedures. A person may only be appointed as an Isolation Officer if he has undergone training and has been assessed and found competent in the isolation and lockout of systems, plant and equipment within the scope of his designation.

Lost Time Injury (LTI) – An injury where, as a result:



- The employee was away from work for one or more days / shifts (excluding the day of the incident); or
- The employee was assigned to another job on a temporary basis; or
- The employee worked at a permanent job less than full time; or
- The employee worked at his or her permanently assigned job but could not perform all of the duties normally connected with it.

Mandatory – Includes designers, suppliers, service providers, principal contractors and any other person or organisation engaged to do work, but without derogating from his status in his own right as an employer or user.

Medical Treatment Case (MTC) - An injury which is not classified as lost time, but which results in medical treatment other than first aid. Medical Treatment includes, but is not limited to:

- The administration of prescription medication
- The use of wound closing device such sutures, staples, etc.
- The use devices with rigid stays or other systems designed to immobilise parts of the body; and

Medical Treatment does not include:

1. Visits to a physician or other licensed health care professional solely for observation or counselling; or
2. Diagnostic procedures (such as x-rays, blood tests, etc.) or the administration of prescription medications used solely for diagnostic purposes (e.g. eye drops to dilate pupils) or as a single dose administered on first visit for a minor injury or discomfort.

Near Miss – An incident that has occurred that did not result in any injuries, illnesses, environmental or property damage but had the potential to cause an injury, illness, environmental or property damage. Sometimes also referred to as a Near Hit.

Nominated Project Management Representative – A Risimati Engineers employee who has been assigned specific responsibilities with regard to this Occupational Health and Safety Specification.

Personal Lock – A single lock with one unique key controlled by the owner. Used for personal protection (isolation and lockout system).

Principal Contractor – A person or organisation providing construction work to the Client at a project site in accordance with an agreed scope of work/services, specifications, terms and conditions.

Service Provider – A person or organisation providing services to the Client or any other party associated with the project which does not qualify as construction work.

Supplier – A person or organisation supplying and delivering goods to the Client or any other party associated with the project.

2. Health and Safety Management Plan

Every contractor must prepare, implement and maintain a project-specific Health and Safety Management Plan. The plan must be based on the requirements set out in this specification as well as all applicable legislation. It must cover all activities that will take place on site, from mobilisation and set-up through to rehabilitation and site demobilisation.

The plan must demonstrate the contractor's commitment to health and safety and must, as a minimum, include the following:

- A copy of the contractor's Health and Safety Policy



- Arrangements concerning the identification of applicable Legal and Other Requirements, measures to ensure compliance with these requirements, and measures to ensure that this information is accessible to relevant personnel
- Procedures concerning Hazard Identification and Risk Management, including Risk Assessments and Pre-Task Hazard Assessments (a systematic method of managing hazards according to risk priority must be employed)
- Details concerning Organisational Resources, Accountabilities and Responsibilities – this includes the assignment of safety responsibilities to applicable roles within the organisation; the identification of the Safety Officer(s) as well as site agents, managers and supervisors; and the identification of personnel responsible for carrying out safety inspections (additional resources need not be provided, as this task may be shared with other duties and may be rotated within a team)
- Details concerning Training, Competency and Awareness – this includes procedures regarding the selection, placement and training of personnel, including induction training, ongoing training in basic safe work procedures, and occupational health and safety training for newly hired or promoted supervisors; initiatives / programmes for promoting safety awareness should be described
- Supplier and Contractor Management procedures – a process must be in place for the assessment of sub-contractors and suppliers with regard to occupational health and safety requirements / performance
- Documentation and Document Control – a system of health and safety related plans, procedures, work instructions, registers, forms and checklists must be developed and maintained, and procedures must be in place for the control of these documents
- Communication and Consultation arrangements concerning occupational health and safety, including project health and safety meetings, Daily Safe Task Instructions, Toolbox Talks, notice boards, and Safety Observations and Coaching; details concerning contractor senior management involvement with their staff in consultative processes and daily management safety walkabouts should be included
- Operational Control – rules and regulations pertaining to health and safety (particularly safety critical issues such as isolation and lockout, working at height, confined spaces, hazardous substances, etc.); procedures that are in place for recurring work activities; and rules pertaining to the provision of Personal Protective Equipment (PPE) including a PPE matrix for the project (the contractor must provide PPE free of charge to all of his employees)
- Management of Change – a process must be in place to ensure that health and safety risks are considered before changes are implemented
- Business Resilience and Recovery procedures, including evacuation and emergency response plans
- Measuring and Monitoring plans, including monitoring employee exposures to noise, dust, etc. to ensure the provision of a healthy and safe work environment (Note: If occupational hygiene monitoring is required, an AIA (Approved Inspection Authority) must be used.)
- Non-conformance, Incident and Action Management procedures which describe the protocols to be followed with regard to accident / incident reporting, recording, investigation, analysis and follow-up on corrective and preventative actions



- Procedures relating to Data and Records Management – measures must be in place to ensure that all health and safety related records and data are maintained, accurate, current and secure
- Performance Assessment and Auditing procedures concerning documented daily site health and safety inspections; inspections (by a competent person) of plant, tools and equipment prior to establishment / use on site and at least monthly thereafter; and monthly internal audits to ensure compliance with the health and safety management plan (the contractor must audit his own systems as well as those of his sub-contractors); and

Prior to mobilisation, the Health and Safety Management Plan must be forwarded electronically, and as a hard copy, to the Appointed Construction Health and Safety Agent for review and approval before work commences on site. The plan will be audited for completeness and, if found to be adequate, will be accepted (typically “with comments”). Work may not commence until the plan has been accepted.

Once the plan has been accepted, the contractor must action and resolve any issues within 30 days from the start of work.

If the issues requiring corrective action are not resolved within this 30 day period, the contractor will be required to stop any work related to the outstanding actions until they have been resolved.

Any proposed amendments or revisions to the contractor’s Health and Safety Management Plan must be submitted to the nominated project management representative for acceptance.

Note: Should it be identified that the contractor has overlooked a high risk activity, and as a result has omitted the activity and associated control measures from the Health and Safety Management Plan, the plan will not be approved.

3. Health and Safety Policy

Each contractor must develop, display and communicate a Health and Safety Policy that clearly states the contractor’s values and objectives for the effective management of health and safety. These values and objectives must be endorsed by the contractor’s management representatives and must be consistent with those adopted for the project.

The contractor’s employees must be involved in the drafting of the Health and Safety Policy.

The policy must be signed and dated, and must be reviewed annually.

The policy must commit to:

- Compliance with all applicable legal requirements
- The effective management of health and safety risks
- The establishment of measurable objectives and targets for improving performance, and the provision of the necessary resources to meet these objectives
- The prevention of incidents; and
- Achieving continuous improvement with regard to health and safety performance.

4. Legal and Other Requirements

Contractors must comply with all applicable national, provincial and municipal legislation. In addition to the requirements above, the contractor must comply with any national standard that has been incorporated into legislation and this specification.

The contractor must compile a register of all requirements applicable to the work that will be carried out / services that will be provided. For each requirement, the current compliance status as well as actions to gain or maintain compliance must be indicated. This register must be updated regularly to ensure that it remains relevant.



The contractor must ensure that his direct employees as well as the employees of his subcontractors have been informed of all such applicable laws and standards. The requirements as described in this section is applicable to all activities under the contractual scope as described in the contractors commercial contract.

5. Hazard Identification and Risk Management

Prior to the commencement of any work, including mobilisation and site set-up activities, the contractor must demonstrate to the satisfaction of the nominated project management representative that a detailed hazard identification and risk assessment process has been followed for all work to be performed as well as for all associated equipment and facilities. The contractor is responsible and accountable for ensuring that effective procedures and assessment systems are in place to control hazards and to mitigate risks to as low a level as is reasonably practical.

The process of analysing and managing risk must follow the following steps:

- Establishing the context of the risk assessment, including acceptability criteria for the risk analysis
- Identifying hazards, determining risk scenarios and selecting a suitable level of risk evaluation
- Evaluating risks by qualitative or quantitative assessment(s) and assigning ratings (classification)
- Recording the risk analysis in a risk register
- Managing risks (prioritising for action) according to their classification
- Identifying and implementing controls to ensure that risk levels are as low as reasonably practicable (ALARP) – the following hierarchy of controls must be applied:
 - w **Elimination** of the risk scenario
 - w **Substitution** with a less hazardous material, process or equipment
 - w **Isolation** – isolating the hazard from the person or the person from the hazard
 - w **Engineering** – redesigning equipment / work processes or introducing engineering / process controls
 - w **Administration** – introducing administrative controls or management strategies, e.g. permitting systems, procedures, training, etc.; and
 - w **Personal Protective Equipment (PPE)** – issuing and use of PPE as a last resort.
- Developing action plans for reducing risk levels / managing risks
- Verifying the completion of actions
- Re-evaluating the risks and classifications as appropriate; and
- Reviewing and updating the risk register.

Prior to site establishment, the contractor must conduct a baseline risk assessment identifying foreseeable hazards and risks on site. Details concerning proposed mitigation measures / controls must be included in the baseline risk assessment for acceptance by the nominated project management representative.

Once established on site, the contractor must ensure that detailed project-specific issue-based risk assessments are developed, approved by the contractor and communicated to all relevant employees prior to the scheduled start of any work.

The contractor's site management representatives, supervisory personnel, technical experts (as required) and workforce personnel directly involved with the task being examined must participate



in the risk assessment processes. Nominated project management representatives must be invited to attend the risk assessments to provide input where required.

UNDER NO CIRCUMSTANCES may the contractor's Health and Safety Officer perform a risk assessment in isolation. The active participation of all staff referred to above is mandatory.

An Issue-Based (Task-Based) Risk Assessment must at least:

- Be accompanied by a work method statement (the work method statement will describe in detail the specific job or task to be performed)
- Provide a breakdown of every job or task into specific steps
- Identify the hazards or potential hazards associated with each step
- Assess the risk that every hazard identified presents
- Include consideration of possible exposure to noise, heat, dust, fumes, vapours, gas, chemical handling / use, ergonomics, vibration or any other identified health exposure risk on site; and
- Describe how the hazard is controlled such that the residual risk is as low as reasonably practicable (ALARP) to allow work to commence and be completed safely.

Hazards and risk scenarios must be communicated to all persons potentially affected.

Particularly for significant risks, the contractor must develop action plans (in writing) to reduce the risks to levels as low as is reasonably practicable.

6. Organisational Resources, Accountabilities and Responsibilities

The contractor is solely responsible for carrying out the work under the contract having the highest regard for the health and safety of all persons on the project site (including visitors).

Health and safety is the responsibility of each and every individual on site, but particularly the contractor's management team who will be required to set the tone.

Visible commitment is essential to providing a safe work environment. Contractor managers and supervisors at all levels will be required to demonstrate their commitment and support by adopting a risk management approach to all health and safety issues. They will need to consistently take immediate and firm action to address violations of health and safety rules and actively participate in day to day activities with the objective of preventing harm to people, the environment and property / equipment.

The contractor's management representatives are responsible and accountable for health and safety performance on the project. Key responsibilities include the following:

- Preparation, implementation and maintenance of a risk based Health and Safety Management Plan specific to the work that will be carried out.
- Implementing an effective hazard identification and risk management programme to ensure that all reasonably foreseeable hazards are controlled in order to minimise risk.
- Participation in a health and safety review with nominated project management representatives prior to site establishment.
- Ensuring that all contractor employees have clearly defined responsibilities with regard to health and safety, and that these responsibilities are clearly communicated, understood and fulfilled.
- Establishing a system for ongoing training and assessment of skills and competence.



- Establishing procedures to ensure that only fully qualified and competent personnel are permitted to work on site.
- Ensuring that all personnel are kept up to date with regard to health and safety information (e.g. risk assessment reports, incident reports, etc.) and that feedback is provided promptly concerning issues / concerns raised.
- Establishing and maintaining consultative processes with employees for the duration of the project, and implementing programmes that encourage continuous improvement and provide recognition for suggestions made by employees
- Establishing and implementing health and safety programmes and procedures to ensure that all work is carried out in compliance with the requirements of this document, the contract, and all applicable legislation
- Maintaining operational control for the protection of site personnel and the public, including, erecting and maintaining safeguards, providing all facilities necessary for the maintenance of proper personal hygiene, preventing unnecessary interference due to the passage of people and equipment / materials at or near the site, preventing nuisance / excessive noise and unreasonable disturbances, and ensuring the adequacy, stability, structural integrity and safety of all construction works, installations and operations.
- Ensuring that the contractor's Project Manager, Health and Safety Officer(s) and Health and Safety Representatives attend site health and safety meetings.
- Providing the nominated project management representative with accurate health and safety statistics; and
- Providing the necessary resources for health and safety audits to be conducted and supporting the auditing process.

All costs associated with meeting these responsibilities will be borne by the contractor.

Any cost associated with any work stoppage due to non-compliance with a health and safety requirement will be for the contractor's account.

6.1 Appointments and Delegations

Each contractor working on a project or occupying the project premises is an employer in his own right, and must comply with the requirements of all applicable legislation with regard to health and safety related appointments and delegations for the project. Documented proof of all appointments (which must be signed) must be available for inspection by the nominated project management representative, or anyone legally authorised to do so.

As an annexure to the Health and Safety Management Plan, the contractor must provide organisational charts that indicate the internal (company) and site hierarchy. The site organisational chart must clearly indicate:

- Subcontractor appointments and the site structure within the subcontractors site team.
- Functional and legislative reporting lines
- which persons have been assigned health and safety related responsibilities (i.e. are carrying appointments).

Proof of training and competence as well as a valid medical certificate of fitness must be provided by the contractor when requesting authorisation for a particular employee.

6.2 Project Manager

The contractor must nominate and appoint (in terms of section 16.2 of the OHS Act. 85 of 1993) a competent person (the Project Manager) who will be responsible and accountable for the successful and safe completion of the project.



This person will act as the single point of contact for liaison concerning the project and must have the authority to bind the contractor with respect to the contract.

The contractor's Project Manager will be responsible for the management of health and safety on the site. Key obligations in this regard include:

- Implementation of the contractor's Health and Safety Management Plan
- Implementation of effective hazard identification and risk management processes; and
- Ensuring workforce competence.

The contractor's Project Manager must ensure that provision has been made for all of the health and safety requirements specified in this document, but the following in particular:

- Health and safety planning, leadership and control
- Specific technical competencies for critical and skilled work
- Supervision and control on each shift
- Regular monitoring, auditing and assessment; and
- Workplace inspections.

The contractor's Project Manager must act consistently and strictly against any individual who transgresses a health and safety rule / requirement.

6.3 Supervisors

The contractor must ensure that all project / construction works are supervised at all times by an adequate number of qualified, competent and appointed supervisors who have experience in the type of work being carried out.

Each supervisor must accept responsibilities (in writing as part of his appointment) for ensuring that all work carried out under his supervision is done so in accordance with all applicable legislation, rules, standards, specifications, codes of practice, safe work procedures, and guidelines.

Note: No work may be carried out without an appointed supervisor being physically present in the work area.

Each site supervisor must:

- Be equipped with a mobile telephone to ensure that effective communication can be maintained for the duration of the contract
- Provide and maintain a list of contact persons (names and telephone numbers) for the contractor and all appointed sub-contractors
- Keep a record of all personnel under his supervision (including the date of induction, relevant skills and licences for each person) and be able to produce this list at the request of a nominated project management representative
- Ensure that the requirements specified in this document are discussed with relevant personnel and are adhered to at all times; and
- Take necessary action whenever rules / requirements are not adhered to.

6.4 Health and Safety Officer

The principal contractor must appoint at his cost a full time Health and Safety Officer for the duration of the contract. The Health and Safety officer must be registered with the SACPCMP in the appropriate category or be in process of registration with a confirmation letter from the registrar as proof.

As a minimum the safety officer must have proof of the following training:



- Samtrac / MSRM or equivalent
- HIRA
- Incident investigation

6.5 Health and Safety Representatives

Where 20 or more people are working on a project, a Health and Safety Representative must be elected and appointed. Taking into consideration the number of people employed, the geographical area in which the work is taking place, the different work disciplines, and the shift pattern (if applicable), the contractor must ensure that an adequate number of Health and Safety Representatives (at a minimum ratio of one Health and Safety Representative per 50 employees) are elected and appointed to effectively represent all site personnel.

Each Health and Safety Representative is required to attend an accredited training course for health and safety representatives. The cost of this training will be for the contractor's account.

The contractor must make the necessary allowances for the Health and Safety Representatives to carry out their duties as specified in the applicable legislation.

The contractor must ensure that an appropriate sticker is affixed to the safety helmet of each Health and Safety Representative for identification purposes.

6.6 First Aiders

The contractor must ensure that First Aiders are trained and appointed.

First Aid training must be done through an accredited training institution. The cost of this training will be for the contractor's account.

The contractor must ensure that an appropriate sticker is affixed to the safety helmet of each First Aider for identification purposes.

7. Training, Competency and Awareness

The contractor must ensure that all employees (including sub-contractor employees) are trained and competent, and they understand the risks and controls associated with the work that they perform.

The contractor must implement systems and procedures to ensure that:

- The necessary competencies required by employees are identified (by occupation), along with selection, placement and any training requirements.

Note: A formal training needs analysis must be carried out based on competency profiles, and a training matrix must be developed.

- Roles requiring technical certification, registration or licensing are identified and documented, and these roles are filled only by suitably qualified personnel
- Minimum core health and safety skills required by employees in leadership and supervisory roles are identified and suitable training is provided including hazard identification and risk assessment, incident investigation.
- All employees hold and maintain the required competencies (including appropriate qualifications, certificates and licences) and are under competent supervision
- A site-specific induction and orientation programme that highlights health and safety requirements, procedures, and significant hazards and risks is in place for all new employees and visitors (understanding must be assessed)
- Personnel are trained / briefed on new or amended standards, rules, safe work procedures, risk assessments, etc.
- Refresher training is carried out as required (e.g. re-induction following an absence from site)



- Records of education, qualifications, training, experience and competency assessments are maintained on site for all employees; and
- The effectiveness of training is reviewed and evaluated.

Prior to the commencement of any work, including mobilisation and site set-up activities, the contractor must provide, to the satisfaction of the nominated project management representative, current documentation verifying that the contractor's employees, as well as the employees of any appointed sub-contractors, are competent and have the necessary qualifications, certificates, licences, job skills, training and experience (as required by this document and applicable legislation) to carry out the work that is to be performed.

Note: Only certified copies of certificates, licences, etc. will be accepted.

If it is determined through observation that an employee is not yet competent to carry out a particular task in a safe and capable manner, that employee will be required to cease work immediately and must either be reassigned or be retrained at the contractor's expense.

Foreign qualifications held by employees in safety critical roles must be evaluated by an accredited authority to determine if they are acceptable in terms of meeting the requirements of local legislation.

7.1 General Health and Safety Induction Training

The contractor must ensure that all of his employees, as well as the employees of any appointed sub-contractors, attend the General Health and Safety Induction Training for the project. An employee will not be permitted to enter the site until he has attended this training. Each employee must carry proof that he has completed the induction training and may be removed from the site if such proof cannot be produced on request.

8. Supplier and Contractor Management

The contractor must ensure that processes are in place to ensure that the health and safety risks associated with the procurement of materials, equipment, services and labour are effectively managed:

- Risks associated with the planned procurement of materials, equipment, services and labour must be identified and evaluated
- A process for evaluating a supplier's ability to provide materials, equipment, services and labour that meet defined specifications must be in place
- The properties of all materials provided by suppliers to the project (as well as the properties of their process intermediates, by-products and wastes) must be adequately understood, documented and integrated into operating procedures where exposure to these properties presents a significant health or safety risk
- Procedures, commensurate with the evaluated risk, must be in place for the receiving, storing, dispatching and transporting of all equipment and materials
- A process must be in place for the assessment and selection of all sub-contractors, contracted labour and service providers to ensure suitability PRIOR TO the awarding of any contract or purchase order. The activities / performance of all sub-contractors, contracted labour and service providers must then be managed throughout the contract period
- Before work begins on any contract, all sub-contractor / service provider personnel or contracted labour must receive orientation and induction training in the same way that a direct employee of the contractor would receive orientation and induction training.



9. Documentation and Document Control

The contractor must develop, implement and maintain a documented system of health and safety related manuals, plans, procedures and work instructions.

Safe Work Procedures must be developed and implemented for all activities involving significant health, safety or environmental risk.

A file containing all required health and safety related documentation (signed originals) must be compiled and maintained. The contents of the file will be audited by the Appointed Construction Health and Safety Agent on a monthly basis.

Documentation required by the contractor includes, but is not limited to, the following:

- Letter of Good Standing from the Workman's Compensation Commissioner (where applicable)
- Proof of Public Liability Insurance
- Scope of Work under the contract
- List of Contacts and their Telephone Numbers
- Health and Safety Policy
- Health and Safety Management Plan
- Legal Register
- Organisational Chart for the project
- Appointment Letters (appointment of the contracting company, and appointments for all persons with health and safety related responsibilities)
- Notifications to the relevant authorities that construction work is in progress
- Register of Risks
- Baseline and Issue-Based (Task-Based) Risk Assessments
- Safe Work Procedures, Work Instructions and Work Method Statements
- Planned Task Observations
- Fall Protection Plan (for work at height)
- Inspection Registers, Forms and Checklists (e.g. for portable electrical tools, ladders, safety harnesses, vehicles, cranes and lifting equipment, first aid boxes, fire extinguishers, etc.)
- PPE Issue Registers
- Material Safety Data Sheets
- Emergency Response Procedures
- Incident Records
- A dossier (Employee Personal Profile) for each employee containing:
 - w A copy of the employee's Identity Document or Passport
 - w Certificate of Fitness (Pre-Employment Medical Examination), Annex 3 as per Construction regulations.
 - w Proof of Induction Training
 - w Other Training Records



- w Copies of Qualification Certificates / Certificates of Competence; and
- w Copies of Licences.

- Health and Safety Meeting Minutes
- Copies of Inspection and Audit Reports
- Daily Safe Task Instructions (DSTI's) and Toolbox Talks
- Environmental Management Plan (EMP); and
- Waste Management Plan.

10. Communication and Consultation

The contractor must establish and maintain effective communication and consultative processes for the duration of the project to ensure that:

- All personnel are kept up to date with regards to health and safety matters (e.g. hazards and risks, incidents and lessons learnt, best practices, performance against objectives and targets, etc.)
- General health and safety awareness levels are kept high
- Prompt feedback is given to personnel with regard to health and safety issues / concerns that they raise; and
- Relevant, and often critical, health and safety related information (e.g. design changes, instructions, reporting of hazardous conditions / situations, etc.) is effectively disseminated throughout the contractor's organisation as well as to his sub-contractors.

Details concerning how this will be achieved must be included in the contractor's Health and Safety Management Plan, and must include the following:

10.1 Toolbox Talks

The contractor must ensure that a Toolbox Talk is prepared on a weekly basis and shared with all personnel for which the contractor is responsible (including all sub-contractors). Toolbox Talks must address health and safety issues that are relevant to the work performed on the site and may include information / knowledge sharing, lessons learnt from incidents that have occurred, information concerning specific hazards / risks and control measures to prevent injury, etc.

Attendance records must be kept and maintained in the contractor's health and safety file.

11. Operational Control

The contractor must develop and document procedures and / or work instructions that detail the controls required to effectively manage the health and safety risks associated with his work activities. These procedures must reference applicable operating requirements, be communicated to all relevant personnel, be available to the appropriate users, and be implemented / followed.

Furthermore, the contractor must develop, document, communicate and implement procedures and / or work instructions for the operation and maintenance of plant and equipment. Plant and equipment must be maintained, inspected and tested to ensure safe operation and to ensure that it meets design descriptions and specifications.

The contractor must comply with the following requirements and must incorporate these requirements into his procedures and / or work instructions:

11.1 General Rules of Conduct

All persons required to conform to the following rules of conduct while on the site.

The following acts are prohibited:



- Engaging in practical jokes, horseplay, scuffling, wrestling, fighting, or gambling
- Assault, intimidation, or abuse of any person
- Insubordination towards any supervisor or manager
- Refusing to carry out a reasonable and lawful instruction concerning health and safety
- Entry into any restricted area (including barricaded areas), unless authorised to do so by the responsible person
- Unauthorised use / operation of any equipment or machinery
- Negligently, carelessly or wilfully causing damage to any property
- Destroying or tampering with safety devices, signs, or signals
- The use of water from fire hydrants or hose reels for any purpose other than extinguishing a fire
- The wilful and unnecessary discharging of fire extinguishers
- Refusing to give evidence or deliberately making false statements during incident investigations
- Bringing alcohol, drugs, or any other intoxicating substance onto site
- Bringing a firearm, ammunition, or any other offensive weapon onto site
- Bringing animals onto site
- The use of an iPod (or similar) whilst working on site
- Sleeping on the job
- Building fires on site, unless in a suitably constructed barbequing facility; and
- Pouring / pumping / flushing any substance (chemical / hydrocarbon / waste water) into a storm water drain, onto bare soil, or into any area where the substance is not effectively contained.

Any of the above actions may result in the temporary or permanent removal of the offending person(s) from site, as well as possible prosecution. The decision of the nominated project management representative shall be final and binding in respect of any dispute that may arise from the interpretation of these requirements.

The Department of Public Works will not get involved in contractor disciplinary rules and procedures. The contractor will simply be informed (with reasons) that the offending employee(s) will be denied access to the project site. Once the contractor has been informed, the employee(s) must be removed from the site immediately.

11.2 Site Access and Security

The contractor may not hire any security services for the project site unless authorization has been obtained in writing from a nominated project management representative.

11.2.1 Access Control

The contractor must comply with all access control policies, procedures and systems applicable to the project site as detailed by the project requirements.

Failure to comply with these requirements will be viewed as a serious safety breach and may result in the permanent removal of the individual(s) / contracting company from site or suspension without payment.

- Contract period access – an access card valid for the full contract period will be issued to an individual once the following requirements have been met:



1. Completion of all required project induction training.
2. Completion of a pre-employment medical examination.
3. Completion of special training / licensing if applicable (e.g. mine driving licence); and
4. Provision of proof of job / trade-specific qualifications, licences, training, experience and competency (as required).

Note: No access card will be issued unless proof of identification is provided (i.e. an identity document or a valid passport). For foreign labour, an access card will only be issued if a valid work permit is produced.

Note: A driving licence will not be accepted as proof of identification.

11.2.2 Trespassing

The contractor must ensure that no employee (including sub-contractor employees) trespasses on any land lying beyond the boundaries of the project site.

If instructed by a nominated project management representative to do so, the contractor must remove from the project any employee who fails to comply with this requirement.

The contractor's activities must be confined to the specified construction areas, and access to these areas may only be by means of specified routes.

All required fencing (specification will be provided) must be erected and maintained by the contractor.

11.2.3 Visitors

Visitors (including reps and suppliers) must be advised in advance of the mandatory Personal Protective Equipment (PPE) requirements for the site, and must arrive with all of this PPE.

All visitors must undergo a visitor induction briefing before entering the site.

Whilst on site, visitors must be accompanied at all times by an appointed "Host" who has been inducted fully. The visitor(s) must be met at the Security Office, and when the visit is over, must be escorted back to the Security Office.

Note: Visitors are not permitted to perform any work on site.

Note: Any request (typically made by a government official) to carry out a site inspection must be referred to the nominated project management representative. The contractor must not arrange any such inspection without prior approval from the nominated project management representative.

11.2.4 Alcohol, Drugs and Other Intoxicating Substances

The contractor must ensure that all personnel under his authority do not at any time enter the site or perform any work whilst under the influence of alcohol, a drug, or any other intoxicating substance.

Selling or possessing drugs, alcoholic beverages or any other intoxicating substance on the site is strictly prohibited.

11.2.5 Firearms, Ammunition and Offensive Weapons

Firearms, ammunition, and offensive weapons of any kind are strictly prohibited. No person may enter / will be permitted to enter the site carrying any such item.

11.3 Signs and Notices

The contractor must ensure that all required safety signs and notices are prominently displayed in accordance with the applicable legislation and good safety practice.

Signs and notices must be in English as well as any other language(s) commonly spoken on the project site.

All symbolic signs must comply with the applicable national standard (if one exists).

No person may deface or damage any safety sign or notice. No person may remove or alter any safety sign or notice unless authorised to do so.



11.4 Barricading

Barricading must be erected to:

- Prevent the public from entering any of the construction areas.
- Prevent personnel from making contact with an identified hazard
- Provide warning of the existence of a hazard
- Prevent unauthorised access (by people or vehicles / mobile equipment) into an area where a hazard exists or where a hazardous activity is being carried out
- Define the boundaries of a hazardous location and / or restricted area; and
- Allow a work team to perform hazardous tasks without persons unfamiliar with the hazard(s) accessing the area.

Although not limited to these situations, barricading must be erected / installed:

- To protect openings and edges (to prevent persons from falling, all openings and edges associated with floors, stairs and the open sides of buildings / structures during the course of erection / construction must be protected by sturdy, rigid barriers capable of withstanding a force of at least 1 kN applied in any direction at any point.
- To prevent access into areas where overhead work is in progress
- To route vehicles safely through (or around) construction areas; and
- To protect members of the public who may be in the vicinity of a work / construction site.

In all cases, the erection of barricading must be a temporary measure. It must only remain in place until the hazards is eliminated or the potentially dangerous situation is rectified.

A barricade must present a sturdy physical barrier to entering an area. Therefore, plastic cones, post and chain systems, “danger tape” and “snow netting” will not be accepted as barricading and may only be used for the purposes of low risk demarcation. For example, snow netting may be used for the demarcation of lay down areas.

Acceptable forms of barricading include:

- Hoarding panels (no less than 900 mm in height) that can be securely fastened together to form a fence line may be used. Hoarding panels may be constructed from a variety of materials (e.g. wooden board, steel sheeting, wire mesh on a steel frame, etc.)
- Wire mesh fencing (no less than 900 mm in height with sturdy posts spaced at intervals of no more than 3 metres) may be used in certain circumstances, e.g. around excavations
- Sturdy, rigid, and securely fixed (i.e. bolted, welded, clamped, etc.) metal guard rails may be used, particularly for protecting openings, holes and edges associated with floors, platforms, walkways, etc. The top rail must be positioned at a height of between 900 mm and 1,100 mm above the working surface, and a mid-rail must be provided

Regardless of the type of barricade used, the following requirements must be met:

- The installation, alteration and removal of barricades must be supervised by a competent person
- The barricading must be uniformly and intelligently configured
- The barricading must be stable, conspicuous and effective



- The barricading must completely surround the work area / hazardous area
- General access requirements around the work area / hazardous area (such as pedestrian walkways, operational access, or general thoroughfares) must be taken into consideration when erecting a barricade
- The extent of the area that is barricaded must be kept to a minimum so as not to unnecessarily restrict access to other areas. If access routes to other areas are blocked by the barricade, alternative routes must be identified and signposted
- All barricaded areas must have properly designated points of entry / exit for personnel and / or vehicles. Each access point for personnel must be fitted with a self-closing gate. A sign indicating, "DESIGNATED ACCESS POINT – AUTHORISED PERSONNEL ONLY", must be fitted to each gate
- Additional signage providing warning of specific hazards (e.g. falling objects, electricity, etc.) including, "NO UNAUTHORISED ENTRY", must be attached to all gates and, where required, to the barricading itself. The signage must be visible from all angles and must be large enough to be read from a distance of 10 metres
- Barricading must be clearly visible at all times (day and night). If necessary, flashing warning lights must be used
- Tags must be attached to the barricading displaying the name and cell phone number of the person responsible for the barricade, and specifying the reason for the barricading and the date on which it is scheduled to be removed
- Should a person require access to a barricaded area, authorisation must be obtained from the person responsible for the erection of the barricade. The hazards that are present and the Personal Protective Equipment that must be worn within the barricaded area must be communicated to the person seeking access
- Each barricade must be listed in a register, and each must be inspected daily to ensure that it is still intact and that its positioning is still effective
- All barricades must be properly maintained and repaired as required
- When the work has been completed and the hazard has been eliminated, all barricading must be removed without delay. A barricade may not be left in place if no hazard exists
- Before a barricade is removed (allowing general access), the area must be inspected by the person responsible for the work that was carried out, to ensure that the area is once again safe. If applicable, the person accepting the area back for general use shall do so on completion of his own safety inspection
- Authorisation to remove (or modify) a barricade may only be granted by the person responsible for the erection of the barricade.

11.5 Trenches and Floor Openings

The Principal Contractor must implement and comply with **Construction Regulation 13**.

The Principal Contractor must ensure that all excavation (trenching) work is carried out under the supervision of a competent person who has been appointed in writing.

A risk assessment must be conducted for any excavation (trenching) works. A

Permit to Work must be established before commencing any excavation work

Barricading is provided around all holes or openings to prevent any person being injured as a result of a fall.



Where it is impracticable to provide fixed guard railing, effective removable barriers are provided at all unguarded openings in guard railing or floors, and is maintained in position at all times until the hazard no longer applies.

Personnel must immediately report any unusual conditions that may be found, such as underground power cables, pipelines, sewers or inconsistent materials, to the Client representative and, if risk to personnel safety is involved all work is to be stopped until approval to continue is granted by the Client representative.

Safe access and egress is to be provided and sides battered or shored to the satisfaction of the Client representative.

All excavations must be on register and inspected daily before work commences and after inclement weather by the Principal Contractor appointed competent person and declared safe and his findings noted in the said register.

Note: No loose material is allowed within 1m of the cable trench edges.

11.6 Scaffolding

11.6.1 *Training, Competency and Supervision*

Scaffolding may only be erected, maintained, altered or dismantled under the strict personal supervision of a competent Scaffolding Supervisor (or Scaffolding Inspector) appointed in writing by the contractor.

Scaffolding may only be erected, maintained, altered or dismantled by competent and appointed Scaffolding Erectors (or Scaffolding Builders). It is the Scaffolding Supervisor's responsibility to ensure that all employees carrying out such work are suitably trained and experienced.

A certificate of competency issued by a reputable (i.e. accredited and approved) training provider must be produced for each Scaffolding Supervisor and each Scaffolding Erector.

11.6.2 *Erection and Dismantling of Scaffolding*

Only approved scaffolding components may be used to erect a scaffold. Scaffolding must be erected, modified and used in accordance with the manufacturer's guidelines / recommendations, and in strict compliance with all applicable legislation and standards (latest version of SANS 10085-1).

Base width to scaffold height ratios prescribed by regulation or by the manufacturer of the components must be adhered to whichever is the more strict.

If the scaffolding is to be load bearing (i.e. other than normal access and workplace storage) then full calculations and a design must be prepared and authorised in writing by a structural engineer. The load limits specified by the scaffolding manufacturer may not be exceeded under any circumstances.

Scaffolds must be plumb and level at all times.

All scaffolding components must be in good condition (i.e. undamaged and free of corrosion).

All scaffolding components must be properly connected / secured and scaffolding must be effectively braced.

Scaffolding must be secured to the structure every 6 metres vertically and every 10 metres horizontally (as a minimum). Adequate underpinning, sills or footplates must be provided for scaffolds erected on filled or otherwise soft ground (including sand or gravel).

Each person erecting, maintaining, altering or dismantling scaffolding must use fall protection at all times (i.e. a full body safety harness with two shock absorbing lanyards fitted with scaffold hooks). The work must be planned to enable every Scaffolding Erector to be securely anchored at all times. A suitable lanyard length (not exceeding 2 metres) must be selected taking the potential fall distance and height of attachment (height of anchorage point) into account. If the lanyard is too long or the anchorage point is too low, the person may hit the ground / a platform / objects below him before the lanyard is able to break his fall.

The area around the base of a scaffold must be barricaded to prevent unauthorised access into the work area. When scaffolding is erected / dismantled on a level / platform / floor lying above ground level and the potential exists for components to fall to levels below the level on which the



scaffolding is positioned, then the area directly below the scaffolding on each of those levels must also be barricaded. Appropriate warning signage (i.e. “Overhead Work In Progress” and “No Unauthorised Access”) must be prominently displayed.

Hoists, lifts and approved material baskets must be used (where available) to lift scaffolding components to elevated positions.

Where components are passed from hand to hand during the erection / dismantling of a scaffold, each Scaffolding Erector must always stand on three boards and not directly above the person below him. During this process, each Scaffolding Erector must remain within the confines of the scaffold and must expose as little of his body as possible to minimise the risk of being struck by a falling component. Good communication between team members must be maintained at all times.

No scaffolding components, tools, or any other material may be dropped from height or thrown from one level to another. Components / tools / materials must be lowered or lifted in a controlled manner. Use may be made of a chute.

Each tool must be secured to the wrist, harness or structure by means of a lanyard. A tool bag (around the waist or over the shoulder) may be used for carrying tools up and down a scaffold structure. Tools or equipment may not be carried by hand up or down a structure, as both hands must be used for climbing. If necessary, a rope must be used for lifting or lowering tools or equipment.

While a scaffold is being erected or dismantled, no scaffolding components may be stacked on the scaffold structure unless it has been designed for that purpose. Any loading of a scaffold structure must be authorised in writing by a structural engineer.

For special scaffolding, a design must be prepared by the appointed Scaffolding Supervisor and this design must be authorised in writing by a structural engineer before the scaffolding is erected.

Scaffolding may not stand on steel grating unless the grating is adequately supported from below. Scaffolding must rather stand on the structure that supports the grating.

Empty drums, crates or bricks may not be used to prop up, support or anchor scaffolding.

Scaffolding may not be erected if it is raining or in winds stronger than 35km/h.

A green tag (displaying the words, “Scaffold Safe to Use”) or a red tag (displaying the words, “Scaffold Unsafe to Use”) must be prominently displayed on each scaffold at all times. The tag must be positioned close to the base of the ladder / staircase provided for safe access. The wording on the tags must be in English and any other language commonly used on site.

As a minimum, a green tag must display the Scaffolding Supervisor’s name, the date that the scaffold was erected, and the date that the scaffold was last inspected.

Only an appointed Scaffolding Supervisor may attach, change, update the information on, or remove these tags.

Scaffolding must not be:

- Left partially erected or partially dismantled except for normal work stoppages (for example, over weekends)
- Left in an unsafe condition (if scaffolding is unavoidably in an unsafe condition, barricading must be in place to prevent unauthorised access and the required red tags must be prominently displayed on the scaffold structure); or
- Moved or altered while work is in progress.

Mobile scaffolding must be fitted with brakes, which must be engaged at all times when the scaffolding is in use. A scaffold may not be moved if any person is on the structure.

11.6.3 Safe Access

Safe and convenient access must be provided to every scaffold platform by means of ladders or staircases. Climbing up or down a scaffold on the braces or ledgers is forbidden.

All ladders used to access scaffolding must be securely attached to the scaffold structure.



Hook-on and attachable ladders must be specifically designed for use with the type of scaffolding being used.

If a ladder is used to access a scaffold platform at a height greater than 1.5 metres above the ground, then the ladder must be secured internally (i.e. within the scaffold structure) and there must be an opening (closed with a trap-door) in the platform at the top of the ladder.

If the scaffold platform is at a height of less than 1.5 metres above the ground, then the ladder may be attached externally provided the guard rails around the platform are modified to allow access (the opening in the guard rails must be kept closed using a self-closing guard rail gate). No person may climb over or through the guard rails to gain access to a platform.

If a vertical ladder used on scaffolding is more than 5 metres in length it must be equipped with a ladder cage extending from a point 2 metres from the base of the ladder to a height of 1 metre above the platform (or the uppermost platform) that the ladder is providing access to.

Circular ladder cages must have an internal diameter of no more than 700 mm. Square ladder cages must have internal dimensions of no more than 700 mm by 700 mm.

The requirement for a ladder cage may be waived if platforms are provided at height intervals not exceeding 4 metres, with the vertical ladder secured on the inside of the scaffolding framework and an opening (closed with a trap-door) in each platform.

Vertical ladders must be braced at three metre intervals (as a minimum) to prevent undue movement.

All vertical ladders providing access to a platform must be left in place for as long as the scaffold remains in place and must be inspected as part of the scaffold structure.

Any deviation from the requirements stipulated above must be subjected to a risk assessment and the nominated project management representative must authorise the deviation in writing.

11.6.4 Scaffolding Platforms

Safe work platforms must be provided.

Every work platform must be complete (i.e. from ledger to ledger and from transom to transom without any gaps) in order to prevent personnel, materials, tools, etc. from falling through the platform.

Every work platform must be constructed from manufactured steel scaffold boards (planks) of equal thickness (height). Timber boards are not permitted under any circumstances.

Each steel scaffold board must be securely hooked (fastened) onto the ledgers / transoms that support it.

On all sides except the one facing the structure, every scaffold platform must be provided with:

- Sturdy guard rails positioned 500 mm above the platform floor (the mid rail) and 1,000 mm above the platform floor (the top rail); and
- Steel toe boards that are at least 150 mm high and securely attached such that no gap exists between the toe boards and the platform floor.

Note: Wire mesh infill panels incorporating a toe board may be used instead of a mid-rail.

Scaffold platforms must be as close to the structure as is practicable (but not closer than 75 mm) except where personnel need to sit on the edge of the platform while they work in which case the distance may be increased to no more than 300 mm.

Scaffold platforms must, at all times, be kept free of waste, protruding objects, and any other obstructions. Platforms must be cleaned if necessary to ensure that they are maintained in a non-slip state.

11.6.5 Inspection of Scaffolding

Every scaffold structure must be inspected by a competent Scaffolding Supervisor:

- Prior to use after erection, and at least weekly thereafter



- After inclement weather (heavy rain, strong winds, etc.)
- After any incident resulting in jarring, tilting or overloading
- After any alteration is made; and
- Before being dismantled.

On completion of an inspection, the Scaffolding Supervisor must update the information on the scaffold tag.

A record of each inspection (date and time of inspection, location of scaffolding, findings, etc.) must be captured in a register. The register(s) must be maintained by the Scaffolding Supervisor(s) carrying out the inspections.

11.6.6 Using Scaffolding

The user of a scaffold (i.e. the responsible supervisor) must inspect the erected structure prior to acceptance and must ensure, as far as is reasonably possible, that the scaffold is safe and fit for purpose before allowing his team to make use of the scaffold.

In particular, the user must ensure that:

- The scaffold and the platforms have been constructed to meet the loading requirements of the work that is to be carried out (the Scaffolding Supervisor must be consulted in this regard)
- The Scaffolding Supervisor has checked that adequate ties and braces are in place
- The work platforms are in the correct positions and are complete with toe boards and guard rails
- Safe and convenient access has been provided (ladders and / or staircases); and
- A green ("Scaffold Safe to Use") tag has been attached to the scaffold by the Scaffolding Supervisor.

Use of an incomplete / unsafe scaffold is prohibited.

Unsteady or non-rigid scaffolds must not be used and inadequacies must be reported to, and rectified by, the responsible Scaffolding Supervisor.

The user of a scaffold must ensure that every employee in his team is aware that no alterations to the scaffold may be made by the team during the course of their work, and that if any alterations are required, they must be made by competent Scaffolding Erectors under the supervision of an appointed Scaffolding Supervisor.

A scaffold may not be used:

- If a red tag is displayed indicating that the scaffold is unsafe to use; or
- During inclement weather, defined as wind speeds greater than 40 km/h, thunderstorms, or heavy rain (in excess of 40 mm/h).

Note: With due consideration of possible educational limitations, the contractor must ensure that all employees understand what green and red tags mean.

The area around the base of a scaffold must be appropriately barricaded to prevent unauthorised access into the work area. Appropriate warning signage (i.e. "Overhead Work In Progress" and "No Unauthorised Access") must be prominently displayed.

Loose tools and / or materials on scaffold platforms must be secured using lanyards, wire or fibre rope, or must be placed in secured containers.

Where appropriate, "catch nets" deemed may be installed as an additional safety measure to prevent materials / tools from falling to the ground.



The storage / placement of materials on scaffolding platforms must be kept to a minimum. Debris as well as tools and materials that are no longer required must be removed from all working platforms at least once per day.

Scaffolding platforms must be cleaned regularly.

A heavy load may not be placed on a scaffolding platform unless the scaffold has been designed and constructed specifically for that purpose. Any loading of a scaffold structure must be authorised in writing by a structural engineer.

Scaffolds may not be used as hoisting towers or to support piping or equipment.

Each person working from scaffolding must wear fall protection (i.e. a full body safety harness with two shock absorbing lanyards fitted with scaffold hooks) and must be securely anchored at all times.

All work must be carried out from properly constructed work platforms. Standing on railings or braces in order to perform work is forbidden.

Drums, boxes and other makeshift substitutes for scaffolding may not be used under any circumstances.

Where work on an electrical system is to be undertaken from a scaffold, an electrical engineer must determine whether or not the scaffolding structure requires bonding and earthing. The scaffolding may not be used until this has been determined, and if required, until the structure has been bonded / earthed.

11.6.7 Identification and Inspection of Scaffolding Components

All scaffolding components belonging to the contractor must be properly marked or uniquely coloured to enable positive identification.

Prior to erecting a scaffold, all scaffolding components must be carefully inspected by a competent Scaffolding Supervisor.

Components found to be defective during an inspection must be conspicuously marked and removed to a suitably demarcated quarantine area for destruction, repair, refurbishment or removal from site. Deformed and bent wedges must be straightened and inspected for cracks before being put back into service.

11.6.8 Identification and Inspection of Scaffolding Components

All scaffolding components must be stored in a demarcated storage area in such a manner that they are not exposed to environmental extremes and will not cause injury to persons. Suitable barricading or fencing must be erected and warning signage must be posted (e.g. No Unauthorised Entry).

Within a storage area, scaffolding components must be stacked such that pathways (750 mm in width) are maintained between the stacks. Each stack must be stable and components must be neatly placed to ensure that no ends protrude into any pathway. The various components must be stacked separately.

The weight of scaffolding components must be considered when stacking them in elevated positions.

Any storage area for scaffolding components must be positioned such that it will not interfere with any onsite activity (including the operation of any plant or equipment), block any access way, or obstruct access to any plant or equipment. Before establishing a storage area, the location must be agreed with the nominated project management representative.

11.7 Working at Height

Fall prevention or fall protection measures must be in place for all work carried out at heights greater than 1.8 metres or when working closer to 2 metres from an open edge.

11.7.1 Fall Prevention

11.7.1.1 Work Platforms

Wherever practical, a safe working area must be provided by means of a work platform with fixed edge protection. This may include:



- A fixed work platform or walkway
- A fixed or mobile scaffold; or
- An Elevating Work Platform (EWP) such as a scissor lift, man lift, boom lift or cherry picker.

All work platforms and walkways elevated one metre or more must have complete floors and edge protection must be in place in the form of toe boards and sturdy guard rails / barricades properly secured (i.e. bolted, welded, clamped, etc.) to prevent accidental displacement. Safe access and egress must be provided.

Guard rails must be capable of withstanding a force of at least 1kN applied in any direction at any point.

The top rail must be positioned at a height of between 900mm and 1100mm above the working surface, and a mid-rail must be provided.

11.7.1.2 Floor Openings, Holes and Edges

Any opening or hole (temporary or permanent) in a floor, platform or walkway must be protected by sturdy guard rails (removable if required) or a cover to prevent a person from stepping into / falling through the gap. Covers must be strong enough to support the loads that will be imposed on them and must be secured to prevent accidental displacement.

Ladder way floor openings and platforms must be protected by standard guard rails and toe boards must be fitted along all edges, except at the entrance to an opening where a gate must be installed and so arranged that a person cannot walk directly into the opening.

When open, hatchways and floor openings must be protected by removable guard rails and toe boards of standard construction. When these openings are not in use, covers of adequate strength must be put in place and must be secured to prevent accidental displacement.

Where doors or gates open directly onto a stairway, a platform must be provided and the swing of the door or gate must not reduce the effective width of the platform to less than 500 mm.

11.7.2 Fall Protection

Before carrying out any work at a height of 1.8 meters or more above the ground (or above a platform, floor or surface) where a risk of falling exists (or where a risk of falling onto dangerous equipment / machinery exists even if the potential fall distance is less than 1.8 meters):

- A Fall Protection (and Rescue) Plan must be prepared by a competent person and submitted to the nominated project management representative for approval (the contractor must ensure that this plan is implemented);
- A detailed task-specific Risk Assessment must be carried out;
- A Safe Work Procedure must be in place for the task to be performed; and
- A Permit to Work must be obtained.

Fall protection must be used at all times whenever there is a risk of falling while working 1.8 metres or more above the ground (or above a platform, floor or surface), and whenever there is a risk of falling onto dangerous equipment / machinery even if the potential fall distance is less than 1.8 metres.

An employee has fall protection if he is secured by means of an approved full body harness (correctly rated according to his body mass and the lanyard lengths) with two shock absorbing lanyards (where the potential to fall is greater than 4 metres) or two short restraining lanyards (where the potential to fall is less than 4 metres), double or triple action snap hooks (or karabiner type rings), and secure anchorage points (an employee's lanyard may be attached either directly to an anchorage point or indirectly through the use of a variety of systems that incorporate a lifeline).



Note: When selecting fall protection equipment, care must be taken to ensure that the potential fall distance is greater than the height of the person plus the length of the lanyard with its shock absorber deployed (taking the height of attachment into account).

Anchorage points must, where practical, be above the head of the employee, and must ensure that in the event of a fall the employee will neither swing nor touch the ground.

All permanent anchorage points must be designed and approved by a professional structural engineer.

All anchorage points must be periodically inspected and tested by a competent person to ensure that they are secure and can support the required load. A system must be in place to identify anchorage points as authorised for use.

Temporary anchorage points (and lifeline systems) may only be used if a competent person has certified them safe to use.

If an elevating work platform is used, such equipment must be fitted with a fixed anchorage point for the attachment of fall protection equipment.

The use of fall protection (fall arrest or fall restraint) systems must be avoided wherever and whenever possible through design, the installation of physical barriers that protect employees from falling, and employing alternative methods of working.

Only if physical barriers protecting against free falls cannot be installed must fall protection equipment be used.

Fall protection (fall arrest or fall restraint) systems are items of personal protective equipment and, if required, must be purchased, installed and provided to employees.

Prior to commencing with any work at height, an assessment must be conducted to determine if the work requires the use of fall protection equipment, and if so, which fall protection system is the most appropriate for the work.

There must be a system for ensuring that fall protection equipment is:

- Tested and certified for use
- Inspected by the user before use; and
- Destroyed following a fall or where inspection has shown evidence of excessive wear or mechanical malfunction.

All employees that are required to work at height (in order to carry out routine or non-routine tasks) must first be trained and certified competent to do so.

All employees required to use personal fall protection equipment must be trained and certified competent in the correct selection, use, maintenance and inspection of such equipment.

All fall protection equipment must be thoroughly inspected on at least a quarterly basis by competent persons appointed in writing and each item of equipment must be tagged to show when it was last inspected. All inspections must be recorded in a register. On finding defective or damaged equipment, appropriate action must be taken by the competent person (i.e. the destruction of the equipment to prevent further use).

Employees making use of personal fall protection equipment must do so in strict accordance with the instructions or requirements specified by the manufacturer / supplier of the equipment or system.

Specific pre-use inspection, maintenance and fitting protocols must be established in accordance with the manufacturer's requirements / guidelines and these protocols must be followed by all users of the fall protection equipment.

Solvents may not be used to clean fall protection equipment. Only manufacturer-approved cleaning solutions may be used.

No employee required to use personal fall protection equipment may work in isolation (a minimum of two employees working together is required).



Adequate supervision must be in place at all times for work being carried out at height.

There must be a system for preparing and testing emergency rescue procedures for fall victims.

Note: Even though there is no risk of free fall, fall protection equipment may be required in situations where there is a risk of falling, slipping or sliding down a slope of more than 45 degrees.

Note: The maximum service life of fall protection equipment manufactured of synthetic fibre shall be 5 years from the date of first use and / or manufacture unless otherwise specified by the manufacturer.

An employee may climb or descend a ladder without fall protection provided that he is able to use both hands and legs to do so, faces the ladder, and uses one step at a time. The ladder must be tied off or supported at its base.

Prior to any roof work being performed / prior to employees accessing a roof, a structural engineer must verify that the roof is of sound construction and that it is capable of supporting the weight of the employees as well as any equipment that may be required. Should the engineer's findings be to the contrary, alternative methods of performing the work must be found. Particular care must be taken when work is carried out on an asbestos cement roof or a fibreglass roof.

11.7.3 Risk Assessment and Planning

The following documentation is required for any work where fall protection is required (i.e. where a risk of falling exists):

- A Fall Protection (and Rescue) Plan
- A Risk Assessment for the task to be performed
- A Safe Work Procedure for the task to be performed; and
- A Permit to Work.

As part of the Risk Assessment and planning processes, the following must be considered:

- Hazards relating to accessing the location at height
- The nature of the work location
- The nature of the work activities to be undertaken at height
- Environmental / weather conditions
- The presence of nearby persons who may be at risk due to falling objects (potentially) or who's activities may be affected by the work being performed at height
- The selection of fall protection equipment and / or access equipment
- The selection of anchorage points
- The load ratings of access platforms, work areas, anchorage points, etc.
- The need for multiple employees and the means of communication
- A rescue plan that addresses retrieval / rescue contingencies
- Working above open furnaces / molten metal
- Exposure to heat sources
- The use of a mobile elevating work platform, man basket, suspended scaffold or boatswain's chair; and
- Any other conditions that may affect the safe execution of the task.



11.7.4 Falling Objects

In the process of planning work activities, the risks associated with falling objects (i.e. materials, tools or equipment) must be assessed and appropriate control measures must be identified, implemented, and monitored taking the following hierarchy of control into consideration:

- Preventing objects from falling – by using containment sheeting, toe boards, lanyards to secure tools (to the employee or to the structure), ropes or chains to secure equipment (to the structure), lift boxes, brick cages, etc. and by properly securing loads when lifted by crane or hoist
- Protecting people from falling objects – by establishing barricaded exclusion zones, installing catch platforms or catch nets, displaying warning signage, and posting safety watchers / traffic controllers; and
- Personal Protective Equipment (particularly safety helmets and safety boots) – protective equipment is a last line of defence and must be worn.

Where overhead work is being carried out, barricading must be erected around the work area (at the level at which the work is taking place and at every level below including ground level) to prevent people from entering such an area and potentially being struck by falling objects.

Wherever hazards related to falling objects exist, appropriate warning signage (i.e. “Overhead Work In Progress” and “No Unauthorised Access”) must be prominently displayed.

No items are permitted to lie loose in elevated positions (e.g. nuts and bolts must be securely stored) and good housekeeping standards must be maintained at all times.

No tools, equipment, material, debris, waste, etc. may be dropped from height. Objects must be lowered or chuted to ground level in a safe and controlled manner.

11.8 Ladders

All ladders used on site must be of sound construction and adequate strength.

Only non-conductive ladders made of wood or fibreglass may be used for electrical work or work being performed in proximity to energised electrical equipment or lines.

The use of makeshift ladders is forbidden.

All ladders must be numbered, listed in a register, and inspected by a competent person on a monthly basis (the results of each inspection must be recorded in the register).

Before using a ladder, the user must inspect it for damage.

Ladders with missing, broken, cracked or loose rungs, split stiles, missing or broken spreaders (stepladders) or any other form of damage or defect may not be used.

A damaged ladder must be removed from service (and tagged, “Out of Service”) without delay and must then either be repaired (if possible) or destroyed to prevent further use.

Employees must receive instruction in the correct use and proper care of ladders.

Ladders may only be used as a means of access and egress. The use of ladders as working platforms is prohibited, except for inspection and carrying out minor tasks (i.e. light work and short duration) such as changing a light bulb.

Ladders may not be positioned horizontally and used as walkways / runways or as scaffolding.

All portable ladders must be fitted with non-skid safety feet (or some other means to prevent the base of the ladder from slipping) and the feet must always be placed (stand) on a firm level surface.

The use of bricks, stones, wood or any other material to level the stiles of a ladder is prohibited.

Ladders may not be placed on movable bases such as boxes, tables, trucks, etc.

The base / foot of a ladder must always be secured to prevent it from slipping. The ladder must be held by an assistant if the base cannot be secured in any other way (e.g. tied off).



A straight ladder must extend at least one metre above its support (or above the working platform that it is providing access to). The top of the ladder must be tied off (or otherwise secured to its support) to prevent accidental movement.

A straight ladder must be placed at a safe angle, i.e. tilted at a ratio of approximately 4:1, meaning that the base of the ladder must be one metre away from the wall (or other vertical surface) for every four metres of height to the point of support.

A stepladder may never be used as a straight ladder. A stepladder must be opened fully and the spreaders must be locked securely.

When using an extension ladder, at least four rungs must always overlap at the centre of the ladder.

Ladders may not be joined together unless they have been specifically designed and manufactured for that purpose.

A suspended ladder (i.e. not standing on a base) must be attached in a secure manner to prevent undue swinging or swaying, and to ensure that it cannot be displaced.

A ladder may not be placed against a window, glass or any other material that is unlikely to withstand the force exerted on it by the top of the ladder.

A ladder may not be placed in front of a door or window that opens towards the ladder unless the door or window has been locked or barricaded.

When a ladder is used near an entrance or exit, the base of the ladder must be barricaded.

Materials / equipment may not be placed in close proximity to the base or landing of any ladder.

When ascending or descending a ladder, an employee must always face the ladder and use both hands (i.e. maintain three points of contact).

Nothing may be carried up or down a ladder if it prevents the employee from holding on to the ladder with both hands. Tools must always be properly secured. This can be achieved by attaching them to the wrist using lanyards or placing them in a tool belt around the waist. Tools and materials may also be carried in a bag over the shoulder or hoisted to the landing using a tool bag and rope.

Only one employee at a time may use (i.e. be positioned on) a ladder.

No employee may stand / step above the third rung from the top of a straight ladder or above the second highest step of a stepladder.

Overreaching from a ladder is prohibited. If the target is not within comfortable reach, the employee must climb down and reposition the ladder.

No employee may run up or down a ladder, or jump from the lower rungs / steps to the ground.

All ladders must be properly maintained and cared for.

Ladders must be stored under cover and should be hung in a horizontal position from several brackets.

No ladder may be left lying on the ground or be left exposed to the weather. A ladder left lying on the ground presents a tripping hazard and vehicles running over it may damage it.

No ladder may be left in such a position where it may fall over, be accidentally knocked over, or be blown over by the wind.

Ladders may not be painted, as the paint may conceal damage, defects, labels or other markings.

Instead of paint, clear varnish or wood oil may be used to preserve wooden ladders.

Ladders must be kept clean, as dirt may conceal damage / defects. Oil or grease accumulation on the rungs of a ladder may cause employees to slip.

Before making use of a ladder, employees must make an effort to remove mud, oil, grease, etc. from their boots.



11.9 Electrical Safety

Safe Work Procedures must be in place for all electrical work to be carried out on site (i.e. activities associated with the installation, commissioning, repair, maintenance, and decommissioning of electrical installations and equipment).

All electrical work must be carried out by competent personnel in accordance with the statutory requirements, codes, design criteria, safety standards and safe work procedures applicable to the project.

All employees who will be performing electrical work on site must be certified against the requirements of job and equipment-specific electrical competency standards for the project, which will address job and equipment-specific safe work procedures. Re-certification must take place every two years.

Each employee potentially exposed to electrical hazards must receive electrical hazard training at the commencement of his employment on site and thereafter on an annual basis. The training must address the equipment and conditions specific to the area where the individual will be working. The training material must be documented and training records must be kept.

11.9.1 Electrical Installations

Each electrical installation (temporary or permanent) installed or worked on by the contractor will be inspected by a nominated project management representative to ensure that the installation complies with all statutory requirements, codes, design criteria and safety standards applicable to the project.

A nominated project management representative must approve all electrical work before the installation is energised. Any installation deemed unsatisfactory by a nominated project management representative must be removed / repaired / modified by the contractor at his expense.

The contractor must ensure that a certificate of compliance is issued / is available for every permanent or temporary electrical installation.

11.9.2 Portable Electrical Equipment

Prior to site establishment, the contractor must provide the nominated project management representative with a complete inventory of all portable electrical equipment that he and his sub-contractors intend to use on the site (including plant, machines, appliances, generators, hand tools, lighting, extension cords, etc.). The nameplate data for each item of equipment must be included.

All portable electrical equipment to be used by the contractor on the site must be supplied and maintained in a serviceable condition.

Any electrical equipment that is in poor condition or is not in proper operating order may not be used. Any electrical equipment that a nominated project management representative deems to be unsafe or unsuitable must be removed from site.

Electrical repair work or diagnostic work on electrical equipment may only be performed by personnel that are competent and authorised to perform this work (i.e. qualified electricians).

With the exception of double-insulated equipment, all electrical equipment must have an equipment grounding (earthing) conductor that connects the frame of the equipment being utilised to the grounding (earthing) conductor of the electricity supply system.

All electrical equipment and all electricity supply systems used (including generators) must be inspected and tested by a registered and competent electrician to ensure that all equipment is properly grounded (earthed).

All electrical equipment used on site must be supplied electricity through (i.e. must be protected by) an approved and tested residual current device (or earth leakage device / unit). If a socket outlet does not have a residual current device in the circuit, a portable residual current device must be used. Outlets without residual current device protection must be labelled as such.

Any electrical equipment that causes an earth leakage device to trip or deactivate the circuit may not be used again until an electrician has inspected and tested the equipment and has recorded in a register that the equipment is safe to use.



Interlocks may never be removed or modified, and fuse terminals may never be bypassed to keep current flowing in any circuit.

All generators must be used in compliance with the manufacturer's requirements. Any proposed modification to a generator must be authorised in writing by the manufacturer prior to the modification being made.

Each welding machine used on site must be fitted with a Voltage Reduction Device (VRD). If this is not practical (i.e. for arc welding processes other than stick welding), a dead man's (isolation) switch in the electrode circuit (operated by a trained observer) may be used as an alternative. All welding machines must be properly grounded (earthed).

All portable electrical hand tools used on the site must be double-insulated or properly earthed.

Electrical equipment must be disconnected / unplugged when not in use.

Portable lights must be stable and each lamp / light bulb must be protected by a substantial guard.

Care must be taken to ensure that light bulbs / lamps inserted into a light fitting do not exceed the allotted voltage and power for that fitting.

Each light bulb must fit firmly into its socket.

No person may wear a watch or any jewellery, or carry any metal objects such as a lighter or keys, while working on any electrical system or equipment.

No person may work on or use electrical equipment if his clothing is wet or any part of his body is in contact with water.

No person may handle electrical equipment, equipment cords or extension cords with wet hands or if the floor / ground surface is wet.

Water may never be used to fight electrical equipment fires. If possible, the electrical equipment should be de-energised before fire-fighting activities commence.

When cleaning or performing maintenance work on an item of electrical equipment, the equipment must be unplugged.

Equipment must be unplugged by grasping the plug and never by pulling on the electrical cord.

Equipment may not be unplugged while that equipment is switched on. Nor may equipment be plugged into a receptacle (socket) with the equipment's switch turned on.

Electrical equipment that has a defective plug or wiring may not be used. Repair work to defective / damaged electrical equipment may only be carried out by a qualified electrician.

Extension cords may be used for temporary applications only. Permanent cabling must be installed for long-term needs.

Extension cords may not be run through doors, windows, ceilings or holes in walls.

Extension cords must only be as long as is necessary (i.e. an extension cord may not be substantially longer than is required for the application).

An extension cord must be of sufficient current-carrying capacity to power the equipment that it is supplying electricity to. Cords must not be overloaded. The tripping of a circuit breaker, a receptacle that is warm to the touch, a cord that is warm, or the smell of burning electrical insulation are all indications that an extension cord may be overloaded.

Extension cords must be unbroken and continuous (i.e. no joins or splices in the cord are permitted).

Extension cords may not be daisy-chained (i.e. one extension cord plugged into another extension cord).

Extension cords and equipment cords may not be modified to fit a receptacle (socket).

An extension cord with a moulded multiple receptacle is acceptable if the total load does not exceed the current-carrying capacity of the cord. Detachable multi-plug adapters should be avoided.



Two-conductor extension cords may not be used. A three-conductor extension cord (i.e. a grounded / earthed cord) must be used even if the equipment that it is supplying electricity to uses a two-prong plug.

Extension cords that are frayed have insulation tears, cracks or abrasions, have exposed conductors, or have bent, broken or “spread” plug prongs may not be used.

Extension cords that will be used outdoors must have heavy duty insulation and must be weather and sun resistant.

All electrical equipment cords and extension cords must be covered or elevated to protect them from damage and to eliminate tripping hazards.

The contractor is responsible for protecting his electrical equipment from the weather and from possible mechanical damage.

All portable electrical equipment (including generators) must be inspected, tested and tagged by a competent and appropriately qualified electrician on a monthly basis. Details of these inspections and tests must be recorded in a register that must be made available to the nominated project management representative for inspection.

The inspection and testing must include a continuity test of the grounding (earthing) conductor (as applicable) and a complete examination of the equipment or system to assure safe use.

Any item of electrical equipment that does not pass an inspection / test must be removed from service (and tagged, “Out of Service”) immediately and must then either be repaired (if possible) or removed from site.

Any item of electrical equipment without a tag or with an out-of-date inspection / test may not be used.

Any item of electrical equipment found without a tag or with an out-of-date inspection / test must be / will be removed from service until it has been inspected and tested. If it is found that more than one item of equipment has not been inspected / tested as required, all work with electrical equipment will be stopped until it can be demonstrated to the satisfaction of the nominated project management representative that the contractor's systems and controls are adequate and fully implemented.

In addition to the formal monthly inspections and testing carried out by an electrician, electrical equipment (particularly extension cords, portable hand tools, welding machines, compressors and pumps) must be visually inspected by the user on a daily basis prior to use. Users must be trained to look for cracks in casings, loose casings, outer cord sheathing that is not being held firmly in position at the equipment, cuts / cracks in cord or cable insulation, exposed conductors, damaged plugs / sockets, and missing covers. Damage / defects must be reported immediately.

Employees must immediately stop using and report any electrical equipment or machinery that is shocking, sparking, overheating or smoking. Corroded outlets, switches and junction boxes must also be reported.

11.10 Lockout Tag out [LoTo] Procedures

LOTO must be implemented before Electrical work is performed on new classrooms.

The Principal Contractor is responsible to ensure that a lock out procedure is developed and implemented, the principal contractor must ensure lock outs are in place and that any impact with regards to educational activities are taken into account and permission for isolation of electrical feeds are obtained from the School principal .

To ensure the safety of persons working on the electrical feed system, the Principal Contractor is responsible to ensure Compliance with:

- LoTo procedure.
- Instructing all workmen concerned in its application and implementation.
- Instructing the appointed Principal Contractors' Supervisors in the issue of applicable permits.
- Daily checking of lock outs and permits.



The Principal Contractor is required, but not limited to comply with the Lockout Tag out procedures in the following circumstances:

- Executing tie-ins to existing electrical networks.

Electrical Lockout Tag out Procedure Guideline

The Principal contractor must appoint a competent person to do the lockouts. The appointed person must be a competent person in compliance with OH&S Act – Regulations regarding a Certificate of Competency.

Procedure:

- The Principal Contractor's 16(2) assignee must nominate and appoint a competent person as the responsible person for energising.
- The Client Project Manager must nominate and appoint a competent person for the duty of managing the "Permit to work" system which must entail the stages of issue, revocation and completion.
- All electrical control panels are to be locked by the Principal Contractor's appointed person with padlocks having two keys for the series.
- The Principal Contractor must provide these padlocks.
- The Construction Manager and the Principal Contractor's appointed person would be the sole custodian of these keys.
- The Principal Contractor must provide a sufficient number of padlocks; each with a unique key, for its artisans who are requesting permits for working on equipment.
- These padlocks and keys are numbered for the permit holder's identification.
- The Principal Contractor must ensure that multi locks are available for his staff to cater to multiple lock-outs.
- The Principal Contractor's Construction Manager must provide a sufficient number of tags that are to be attached to the padlocks at the point of isolation by the person working on that piece of equipment.
- These tags must indicate that the equipment is locked-out and bears the name and permit number of the holder.
- Permit to work book must contain three copies, first copy for retention by the person carrying out the work on equipment, second copy to be in the hands of the Principal Contractor's responsible person, and a fixed third copy for the records.
- Permit holders are to enter the names of their assistants in the register and after briefing them on the nature of the work and the dangers involved, they are to sign the register to this effect in the spaces provided.
- The permit holder, having witnessed the isolation, must:
 - Physically test that the equipment is correctly isolated.
 - Sign the permit to this effect.
 - Inform his workers of the nature of the work and hazards involved.
 - Complete and sign the Workers Register and attach to the permit.
 - Attach his lock and tag to the multiple locking device.



- Hand the second copy of the permit and Workers Register to the Principal Contractor's responsible person.
- After completion of the work, the permit holder must remove all tools and equipment and leave the area in a neat and tidy condition.
- The permit holder must sign all copies of the permit and Workers Register to the effect that his work is complete, and remove his tag and lock from the isolator.
- If work continues over more than one shift, a worker must remove his tag and lock at the end of the shift.
- If another person is to work on the machine he must follow the same lockout procedure.

11.11 Arc Welding

All welding machines must be fitted with voltage reducers.

The supply cable to every welding machine must be correctly rated and fitted with an approved plug to be used only with an approved matching plug socket.

The electrical circuit to every plug socket must be protected by a correctly rated circuit breaker and a supply voltage rated earth leakage unit.

Welding cables must be properly insulated and correctly rated for the welding machines on which they are to be used.

Welding cable terminals must either be covered with a properly designed, constructed and installed cover so that inadvertent human contact with the terminals is impossible, whether the cables are connected or not, or the welding cables must be fitted with insulated plugs so that inadvertent human contact with any live part is impossible when the cables are plugged into the machine. Also the plug socket should be such that when the cables are not plugged in, inadvertent contact with a live part of the socket is impossible.

Earth cable clamps and electrode holders must be of an approved type. Earth clamps and electrode holders must be fixed to welding cables with eye terminals and bolts.

All welding machines and safety devices must be subjected to regular planned maintenance and a monthly electrical inspection. The inspection must include a test to ensure that the voltage reducer is functioning properly, by measuring and confirming that the open circuit output voltage is reduced.

Before using a welding machine, the welder must ensure that he is wearing all the required and approved protective clothing and equipment:

- Welding hood
- Leather welding gloves
- Safety boots with steel toe protection
- Flame resistant overalls; and
- Any other clothing or equipment necessary to perform his work safely and efficiently.

Persons assisting the welder must also wear all of the required personal protective equipment.

When changing electrodes or moving the earth clamp, the welder or his helpers must wear gloves to avoid possible skin contact with live electrical parts and to prevent burns.

When attaching welding cables to the terminals of the welding machine, the welder or his helpers must wear gloves, or preferably, the machine should be switched off to avoid possible electric shock.

Helpers who may be holding the work piece being welded must wear gloves and protective goggles.

Where practicable the welder should place protective screens around the area where he is welding, to prevent injury to the eyes of passers-by.



The welder must ensure that the earth cable follows the shortest practical route between the welding machine and the work piece. The earth connection must be directly between the welding machine and the work piece and no building or other structure must form part of the earth return path.

As far as is practicable, the welder should avoid welding under wet or damp conditions. If this is unavoidable, the following precautions should be taken:

- Use only oil filled or other watertight type welding machine
- Keep the electrode holder as dry as is practical; and
- Keep as dry as possible. Stand on an elevated surface out of the water and wear watertight boots and a rain suit. Also ensure that the gloves are in good condition, free of holes.
- Under conditions that result in high perspiration levels, the following measures should be implemented:
 - Use an insulated electrode holder
 - Change clothing regularly (if possible)
 - Use insulated material like rubber mats and/or timber tuck board to separate yourself from the work piece
 - Wear dry gloves on both hands during welding
 - Use fans and air-conditioning to reduce humidity and temperature; and
 - Use an observer capable of responding in an emergency.

When working inside metal vessels or under other conditions where parts of his body may come into contact with conducting surfaces, the welder must take precautions to insulate himself from such surfaces.

When working in confined spaces, the welder must take steps to ventilate the area to prevent inhalation of fumes, which may endanger his health and the health of any assistants.

Engine powered welding machines must not be used in any place that is not very well ventilated since the welder and his helpers may be overcome by carbon monoxide fumes.

The welder should take the necessary precautions when welding objects that may catch alight, explode or release poisonous fumes or gases.

11.12 Electrically Powered Tools and Equipment

All powered hand tools, such as circular saws, drills, chainsaws, percussion tools, jigsaws etc., must be equipped with a constant pressure switch that will shut off the power when the pressure is released. (Exception: this requirement does not apply to concrete vibrators, concrete breakers, powered tampers, jack hammers, rock drills, and similar hand operated power tools).

Electrical power tools must be of the approved double-insulated type. The electric cord, pneumatic or hydraulic supply line of powered tools must not be used for hoisting or lowering of the tool.

Loose clothing, jewellery or gloves that could get caught in the tool must not be worn when operating powered tools. Operators of powered tools who have long hair must keep their hair tied up.

The power source must be disconnected from the tool before making any repairs, servicing, adjustments, or replacing attachments such as drill bits.

11.12.1 Angle Grinders

The following personal protective equipment must be worn when using angle grinders:

- Safety helmet
- Gloves



- Safety glasses (or safety goggles) and a full face shield (i.e. double eye protection)
- Overalls with long sleeves and long pants, avoid any form of loose clothing
- Safety boots with steel toe protection
- Hearing protection
- Breathing apparatus where dust or fumes may be generated
- Where grinding machines are used, a face shield is to be worn as extra protection to the safety glasses; and
- Certain tasks may require the use of a leather apron as determined by a risk assessment.

A 230 mm angle grinder may not be used for free cutting purposes. Exceptions may be approved only if alternative methods evaluated proved more hazardous or no alternative exists. The risk assessment for the task must then specifically include mitigating measures to ensure the safest possible way of performing the task.

The use of 230 mm angle grinders for grinding purposes is acceptable, however should this form of grinding be required, the 115 mm or 125 mm grinders would be preferable.

All angle grinders must have a dead man switch incorporated, with a pressure switch in the handle.

A 230 mm electrical angle grinder unit must incorporate a soft start to reduce the starting strain and a braking system to reduce run on after the unit has been switched off.

All angle grinders must have a spindle lock to assist with changing the disc or grinding wheel. Anti-vibration handles are recommended to further reduce the stress if used for extended periods.

Angle grinders must be equipped and operated with disc guarding at all times.

Before use and mounting of discs it is essential to check the safety codes and specifications printed on the upper side of the disc. Such specifications include the following:

- Revolutions per minute (RPM) – the allowable speed of the disc must be equal to or greater than the maximum achievable speed of the grinder
- Physical dimensions of the disc must meet grinder specification; and
- The disc must be suitable for the material type to be cut / ground as indicated on the disk. Cutting discs must never be used for grinding and vice versa.
- It is critical that the correct disc mounting procedure is followed:
- Check the machine spindle, backup washer and thread
- Check the condition of spindle nut - ensure spanner drive holes are not elongated
- Ensure spindle nut spanner is the tool recommended by machine manufacturers
- Do not use a hammer, pipe or chisel to tighten the nut, or apply additional mechanical advantage to nut torque. A firm "nip" is sufficient to retain the disc
- Ensure the spindle diameter is suited to disc bore. Excessive clearance will cause the machine to vibrate due to eccentricity
- Check to see that the nut and backup washer do not "bottom out". This will result in the disc not being correctly clamped on the spindle
- Ensure the spindle speed is marked on the grinder and that it is less than the allowable disc speed; and



- Fit the disc, with the metal ring or writing to the nut side.

11.13 Fuel Powered Tools and Equipment

Fuel powered tools must be shut down and allowed to cool before being refuelled, serviced, or maintained. Fuel must be transported, handled, and stored in approved fuel containers. Where possible, diesel driven engines must be used in preference to petrol driven engines. All fuel powered tools must be included on the contractor's Equipment Register and the register must be submitted to the nominated project management representative prior to the relevant work commencing.

When fuel powered tools are used in enclosed spaces, the space must be ventilated and the atmosphere monitored to measure toxic gas concentrations. Persons in the space must wear the necessary personal protective equipment. Confined Space Entry clearance may apply. This type of activity must only be undertaken in exceptional circumstances and requires the approval of the nominated project management representative.

11.14 Hand Tools

Employees required to use hand tools must receive training relevant to the tool and have their competency assessed in the operation, inspection and maintenance of the tool. Where necessary, additional applicable personal protective equipment must be worn when using hand tools.

Wrenches, including adjustable, pipe, end, and socket wrenches, must not be used when the jaws are sprung to a point where slippage occurs. Impact tools such as drift pins, wedges and chisels, must be kept free of mushroomed heads. The wooden handles of tools must be kept free of splinters or cracks.

Adjustable wrenches must not be used in lieu of ring or open-end type spanners, unless a risk assessment has been conducted and the use of the adjustable wrench is approved by the nominated project management representative. Wherever possible, ring spanners must be used in preference to open end spanners.

Correct hand tools for the job must be used, e.g. screwdrivers must not be used as chisels, pliers must not be used as hammers.

All wedges and drifts that may spring, fly or fall to lower levels upon impact must be fitted with an attachment which attaches a safety "lanyard" to a solid structure to restrain the impact tool from becoming a projectile.

All hand tools used in elevated areas, that may be dropped or fall to lower levels must be fitted with safety lanyards and attached to solid structures or in the case of podges, scaffold keys etc., attached by wrist lanyard to the user.

Purpose built tools and equipment may not be used unless a risk assessment has been conducted and authorised by the nominated project management representative.

11.14.1 Stanley Knives / Utility Knives

A utility knife must be used as a last resort, when it is the safest tool to use. Always consider alternatives that pose less of a risk to the operator.

Whenever a utility knife is used, ensure that a complete risk assessment is done and that all possible hazards have been addressed.

Only utility knives with retractable blades are to be used. The blade is to be retracted at all times when the knife is not in use or is being stored.

Before using the utility knife, ensure that the tool is in a good condition and the blade is secure in the holder (seated correctly and that there is no play).

Ensure that the blade is always sharp and in good condition. This will prevent the use of excessive force.

Always wear cut resistant gloves and safety glasses when using a utility knife. There is always a risk of the blade breaking under tension and becoming a projectile.

Always ensure that you cut away from your body, and that no part of your body is in the firing line.

Always ensure cleanliness of all equipment in use during the cutting operations.



Utility knives are not to be used for the preparation of electrical cables for termination.

11.15 Inspection of Equipment and Tools

All tools must be inspected by the user before, during and after use. If any faults are identified, the tool must be taken out of service and not used until repaired. Faulty tools that are not able to be repaired must be tagged “out of service” and removed from site.

All powered hand tools must be inspected, tagged and their details recorded in a Tool Register prior to being made available for use. All tools must be inspected by a competent person every three months.

11.16 Manual Handling and Vibration

Any handling or lifting task that can only be done manually must be planned and rehearsed before the task is done.

If more than one person is involved in a task a communication procedure must be agreed in advance. Lowering the load must be done in a controlled manner. Dropping a load is dangerous and must be avoided.

As a guideline 25 kg is considered to be the limit of what a person can safely handle. Where there are loads exceeding 25 kg the risk of handling the load must be mitigated to assure minimal potential for any injury.

When mechanical lifting aids are provided, they should be used.

Extra care should be taken when lifting awkwardly shaped objects.

Position the feet correctly. The feet should be placed hip-width apart to provide a large base. One foot should be put forward and to the side of the object, which gives better balance.

Bend or ‘unlock’ the knees and crouch to the load. The weight will then be safely taken down the spine and the strong leg muscles will do the work.

Get a firm grip. The roots of the fingers and the palm of the hand should grip the load. This keeps the load under control and permits it to be distributed more evenly.

The following should be considered with conducting the Risk Assessment with regards Manual Handling and also take into consideration the task factors, physical demands and tools involved in the task:

- Load weight/frequency
- Hand distance from lower back
- Asymmetrical trunk/load;
- Postural constraints
- Grip on the load
- Floor surface
- Environmental factors
- Carry distance; and
- Obstacles en route.
- Team Manual Handling:
- Load weight
- Hand distance from lower back
- Vertical lift region
- Trunk twisting/sideways bending



- Postural constraints
- Grip on the load
- Floor surface
- Environmental factors; and
- Communication, co-ordination and control.

As far as possible, exposure to vibration must be eliminated. However, if this is not possible, short-term solutions to decrease exposure include:

- Reducing the vibration levels
- Removing the person from the vibrating equipment / tools; and
- Reducing the period of time that the person works with the vibrating equipment / tools (at least 40 minutes break after 20 minutes working with a machine that vibrates excessively).

In order to reduce exposure to vibration:

- Consider buying equipment that operates effectively at lower speeds
- Buy equipment with built-in damping materials
- Buy lighter tools if they are available - they require less of a grip
- Maintain the equipment
- Make sure equipment is balanced and there are no worn parts
- Use remote controls when they are available
- Reduce your grip on the equipment when it is safe. The less time you actually have your hands on the equipment the better. Relax your hands during these brief breaks
- Take scheduled breaks; and
- Do other tasks that allow you to move away from vibrating tools and equipment.

The workplace must be assessed by a competent person for compliance with good design, layout and practice, to avoid or minimise adverse health consequences due to manual handling and vibration issues.

Quantitative evaluations of vibration produced by specific equipment must include the following measurement parameters: direction of movement, frequency, intensity, and variation with time and duration, as per documented methods.

Employees and contractors must be informed of the results of assessments and instructed in appropriate manual handling techniques, where the risk assessment indicates a need.

Workplace vibration sources that could contribute to the exceedance of an Occupational Exposure Limit (hence potential for impact on worker musculo-skeletal fitness) must be identified and adequately characterised.

Manual handling tasks assessed as having the potential to cause a Lost Time Injury (i.e. with potential for impact on worker musculo-skeletal fitness) must be identified and adequately characterised.

Workplace manual / materials handling tasks risk rated as “significant” must be assessed and recorded to include biomechanical factors (e.g. posture, bending, twisting, repetitive motions, working overhead, and exerting force away from the body).

11.17 Personal Protective Equipment

As a minimum, the following Personal Protective Equipment (PPE) must be worn by all personnel (including visitors) at all times whilst on the project site:



- Safety footwear with steel toe protection
- Safety helmet (hard hat); and

Additional PPE requirements must be determined through hazard identification and risk assessment. This hazard-specific PPE (such as hand protection, hearing protection and respiratory protection) must be worn as required (e.g. when in a certain area, when performing a certain task, or when working with a certain substance).

The correct PPE must always be worn:

- In accordance with site requirements (as indicated at the entrances to the project site and at the entrances to buildings / areas on the premises)
- In zoned areas (e.g. noise zones and respirator zones); or
- As required by a Safe Work Procedure, a risk assessment, or a Material Safety Data Sheet (MSDS).

The contractor must provide each of his employees with all required PPE (at no cost to the employee). The specific PPE that is provided to a particular employee must be based on the nature of that employee's work and the location in which the work is performed (i.e. must be based on the hazards to which the employee is exposed). PPE requirements for a particular job or for a particular area must be determined through a risk assessment for that job or area.

Any employee who does not have all of the PPE that is required for him to perform his duties safely will not be permitted to work.

Each employee must care for his PPE, maintain it in good condition, and inspect it on a daily basis.

If an item of PPE has worn out, has become damaged, or is found to be defective in any way, it must be replaced by the contractor.

PPE must be stored in accordance with the manufacturer's requirements / recommendations.

Each employee must receive training in the use, maintenance and limitations of the PPE that is provided to him, and must be made aware of why the PPE is necessary as well as the consequences of not wearing it as instructed (i.e. the potential for injury and / or disciplinary action). Training records must be retained.

Any employee that refuses to wear PPE as required must be / will be removed from the site.

Symbolic signs indicating mandatory PPE requirements must be prominently displayed at the entrances to the project site and at the entrances to buildings / areas on the premises where additional PPE is required. These signs must comply with the applicable national standard (if one exists).

An employee must be appointed to:

- Control the issuing and replacement of PPE
- Keep an up-to-date register as proof that items of PPE have been issued to individuals (an employee must sign for the items that he receives)
- Ensure that there is an adequate supply of all required PPE (i.e. maintain PPE stock levels on site); and
- Carry out regular inspections to ensure that PPE is being used correctly, is being maintained in a good, serviceable and hygienic state, and is not being shared between employees.

11.17.1 Jewellery

Necklaces, dangling earrings, and bracelets may not be worn on the project site.

No ring or watch may be worn where there is a risk that it may become caught in machinery or equipment.



No jewellery or other conductive apparel (such as a key chain or watch) may be worn when carrying out energised electrical work.

11.17.2 Hair

Scalp hair that is longer than the top of the shoulders must be tied up and restrained within the person's safety helmet or within the collar of his or her overalls, shirt or jacket.

For negative or neutral pressure Respiratory Protection Devices, facial hair must not cause the seal between the respirator and facial skin to be broken (or prevent a seal from being formed in the first place).

11.17.3 Task-Specific PPE

In addition to the standard PPE required for the project site (including a safety helmet, safety glasses, safety boots, and high visibility protective clothing), the following task-specific PPE must be used as a minimum by any person carrying out or assisting with such a task:

- Arc Welding – safety glasses and welding helmet (i.e. double eye protection), respiratory protection against the specific airborne contaminants being generated (fumes, gases, dusts, etc.), leather welding gloves, leather apron, leather spats, leather yoke (for work above shoulder height), and knee pads for welders in kneeling positions
- Gas Welding, Cutting or Brazing – gas cutting / welding goggles with shade 4 filter lenses and full face shield (i.e. double eye protection), respiratory protection against the specific airborne contaminants being generated (fumes, gases, dusts, etc.), leather gloves (long cuff for welding and cutting, short cuff may be used for brazing), leather apron, leather spats, and leather yoke (for work above shoulder height)
- Grinding – safety glasses or goggles and full face shield (i.e. double eye protection), hearing protection, respiratory protection where dust or fumes may be generated, leather gloves, leather apron, and leather spats

11.18 Fuel / Flammable Liquid Storage and Refuelling

No fuel (diesel, petrol, paraffin, etc.) or any other flammable liquid (paints, solvents, etc.) may be stored on site.

11.19 Fire Protection and Prevention

The contractor must compile a Fire Protection and Prevention Plan for the work that will be carried out on site.

The contractor must assess / survey his area of responsibility and identify locations where the risk of fire is high, these locations will include as a minimum the slope with its trees. Cognisance must be taken of the fact that certain locations may need to be designated as high risk due to the presence of large quantities of flammable or combustible materials / substances. For all high risk areas, the contractor must ensure that additional precautions are taken to prevent fires and strict control is exercised over any hot work (i.e. welding, cutting, grinding, etc.) that is carried out.

The contractor must supply and maintain all required firefighting equipment. The type, capacity, positioning, and number of firefighting appliances must be to the satisfaction of the nominated project management representative and must meet the requirements of the applicable legislation. Fire mains, hydrants and hose reels will rarely be available on site, so use must primarily be made of portable fire extinguishers.

Firefighting equipment, fixed and portable, must be strategically located with a view to being able to rapidly deploy the equipment in order to bring potentially dangerous and destructive fires under control while still in their infancy.

All fire extinguishers (and any other firefighting equipment) placed on site must be:

- Conspicuously numbered
- Recorded in a register



- Visually inspected by a competent person on a monthly basis (the results of each inspection must be recorded in the register and the competent person must sign off on the entries made); and
- Inspected and serviced by an accredited service provider every six months (the nominated project management representative may require that this frequency be increased depending on the environmental conditions (e.g. high dust levels, water, heat, etc.) to which the fire extinguishers are exposed).

Any fire extinguisher that has a broken seal, has depressurised, or shows any sign of damage must be sent to an accredited service provider for repair and / or recharging. Details must be recorded in the register.

Firefighting equipment may not be used for any purpose other than fighting fires. Disciplinary action must be taken against any person who misuses or wilfully damages any firefighting equipment.

Access to firefighting equipment, fixed or portable, must be kept unobstructed at all times.

Approved signage must be in place to clearly indicate the location of each permanently mounted fire extinguisher, fire hose reel, etc.

The contractor must ensure that all persons working in / entering his area of responsibility are made aware of where all firefighting appliances and alarm points are located.

The contractor must ensure that his employees (and those of any appointed sub-contractors) are trained in firefighting procedures and the use of firefighting equipment.

The contractor must compile an emergency response procedure detailing the actions that must be taken in the event of a fire or a fire / evacuation alarm. All personnel working within the contractor's area of responsibility must be trained, and all visitors must be instructed, on this procedure. Copies of the procedure must be prominently displayed in the workplace in all languages commonly used on the site.

A person discovering a fire must extinguish the fire if he can do so safely, and then immediately report the incident to his supervisor. If the person cannot extinguish the fire, he must raise the nearest alarm and then report the fire as quickly as possible to his supervisor, the person responsible for the area, and / or Security.

On hearing a fire / evacuation alarm, all persons must make any operational plant or equipment safe, and then proceed to the nearest emergency assembly point and await instructions.

All incidents of fire (including the use or misuse of any firefighting equipment) must be reported to the nominated project management representative immediately. Used fire extinguishers must be replaced by the contractor without delay.

No hot work (i.e. welding, cutting, grinding, etc.) or any other activity that could give rise to a fire may be performed outside of a designated workshop without a Permit to Work having been issued.

Wherever hot work is being carried out, a fire extinguisher must be at hand.

Supervisors must carry out workplace inspections regularly to ensure adherence to fire prevention measures and procedures.

At the end of every working period (i.e. before each tea / lunch break and at the end of every shift / day), the workplace must be thoroughly inspected to ensure that no material is left smouldering and no condition / situation exists that could give rise to a fire.

The contractor must ensure that all supervisors and all employees carrying out or assisting with any hot work or any other activity that could give rise to a fire have been trained in firefighting procedures and the use of firefighting equipment. The training must be conducted by an accredited training provider.

When using electrical equipment, all cables must be in good condition and the nearest convenient socket must be used.



No power socket may be loaded beyond its rated capacity through the use of adaptors, etc.

Makeshift electrical connections are not permitted under any circumstances.

Water-based firefighting equipment must not be used on electrical equipment or burning liquids.

Each vehicle used on site for work purposes and each item of mobile equipment with a diesel or petrol engine must be fitted with a permanently mounted fire extinguisher.

Smoking is only permitted in designated smoking areas. Cigarette ends / butts must be properly stubbed out in the ashtrays provided and never thrown into waste bins.

The contractor must ensure that good housekeeping practices are enforced, as this is crucial to the prevention of fires.

All combustible waste materials must be removed from the workplace on a daily basis (at the end of each shift) and placed in waste receptacles located at least 5 metres away from any structure.

The accumulation of waste materials in out-of-the-way places is prohibited.

Offices, desks, cabinets, etc. must always be kept tidy and uncluttered. Waste paper bins must be emptied regularly.

The storage of combustible materials under stairways or in attics is prohibited.

The storage of any materials against the exterior of a building or any other structure is prohibited.

All walkways, passages and stairways must be kept clear (i.e. must be unobstructed) at all times, as they may need to be used as a means of escape.

The areas around and the routes to all exits, fire escape doors, fire hydrants, fire hose reels and fire extinguishers must be kept clear (i.e. must be unobstructed) at all times.

"No Smoking" signs must be conspicuously displayed in and around all storage areas / rooms.

Waste may not be burned under any circumstances.

No flammable liquid (such as petrol, acetone, alcohol, benzene, etc.) may be used for starting fires or as a solvent for cleaning clothes, tools, equipment, etc. Only solvents approved by the nominated project management representative may be used for cleaning purposes.

Whenever any work is carried out involving the use of a flammable substance / material, the area must be cordoned off and appropriate warning signage (i.e. "No Unauthorised Entry", "No Smoking" and "No Naked Flames") must be displayed.

11.20 Smoking

The contractor must not permit smoking on site except within designated smoking areas selected in accordance with the applicable legislation. Such an area must be clearly demarcated and the required signage must be displayed.

Any person found smoking or discarding a cigarette butt outside of a designated smoking area may be removed (temporarily or permanently) from site.

In all designated smoking areas, adequate non-combustible commercial ashtrays and / or cigarette butt receptacles (butt cans) must be provided.

Ashtrays and other receptacles provided for the disposal of smoking materials must not be emptied into rubbish bins or any other container holding combustible materials.

"No Smoking" signs must be strictly observed.

11.21 Housekeeping

The contractor must maintain all work areas in a tidy state, free of debris and rubbish. Unless directed otherwise, the contractor must dispose of all debris, rubbish, spoil and hazardous waste off site in a designated and authorised area or facility. The contractor must familiarise himself with the waste management plan for the site including collection and disposal arrangements, and must align his waste management activities accordingly.



In cases where an inadequate standard of housekeeping has developed and compromised safety and cleanliness, a nominated project management representative may instruct the contractor to cease work until the area has been tidied up and made safe.

Neither additional costs nor contract deadline extensions will be allowed as a result of such a stoppage. Failure to comply will result in a clean-up being arranged through another service provider at the cost of the non-complying contractor.

The contractor must carry out housekeeping inspections on a weekly basis to ensure maintenance of satisfactory standards. The contractor must document the results of each inspection. These records must be maintained and must be made available to the nominated project management representative on request.

The contractor must implement a housekeeping plan for the duration of the contract ensuring that the site housekeeping is maintained. Furthermore, at the end of every shift, the contractor must ensure that all work areas are cleaned, all tools and equipment are properly stored, and construction rubble is removed.

Where the contractor fails to maintain housekeeping standards, the nominated project management representative may instruct the contractor to appoint a dedicated housekeeping team for the duration of the project at the contractor's expense.

Littering is prohibited.

11.22 Waste Management

Waste may not be disposed of unless the disposal of that waste is authorised by law. The contractor must therefore ensure that all waste that is generated is handled, stored, transported and disposed of in accordance with the requirements of the applicable legislation / local authority.

No waste may be removed from the project site to a waste storage or disposal facility unless that facility has been approved for use by the nominated project management representative.

An adequate number of waste bins and skips must be provided by the contractor and suitable arrangements must be made to ensure that these bins and skips are emptied regularly.

Hazardous wastes must be kept separate from general wastes.

Waste disposal service providers must be approved by the nominated project management representative before any waste is removed from site.

11.23 Stacking and Storage

All irregular shaped items will be stacked at floor / ground level in designated stacking areas on a level, firm base capable of withstanding the weight of the commodities being stacked and stacked in such a manner that the items do not topple over or change position due to subsidence or weight transfer when being moved.

Where these commodities are stacked on shelves or racks, the shelves or racks must be designed to carry the weight of the commodity being stacked.

All racks or shelves where heavy material or commodities are stacked will have a weight carrying limitation clearly marked on the structure and have a safety factor of at least +10% of maximum total carrying capacity.

All materials, commodities or articles, which could be damaged due to inclement weather, must be stored under cover.

Waste material that is combustible must not be allowed to accumulate in sufficient quantities to create a hazard.

The storage of material, small equipment, tools, files and general items in cupboards and on shelves must be neat and controlled at all times. Incompatible substances must not be stored in or on the same cupboard or shelf.

No equipment, tools, files or documents may be stored or stacked on top of cupboards which are higher than 1.5 metres in height.



11.24 Occupational Hygiene

The contractor must ensure that the exposure or potential exposure of his employees to any of the following stressors is assessed and measured (a baseline survey must be carried out by an Approved Inspection Authority):

- Noise
- Thermal stress (heat and cold)
- Particulates (dust)
- Chemicals
- Vibration (hand / arm vibration and whole body vibration)
- Ergonomics
- Illumination. (only when the contractor plan to work during the night)
- Any other stressor that the hygienist identifies.

If it is determined that exposure levels for a particular stressor are unacceptable, then a monitoring and control plan must be implemented to manage any risk of overexposure.

Note: Where chemical substances are to be used as part of the construction process, the contractor must ensure that the chemical composition of each substance is known. Carcinogenic (cancer-causing) ingredients must be specifically identified with due understanding that no chemical known to cause cancer will be permitted for use on site (an alternative will need to be sourced).

11.25 Lighting

Emergency lighting must be provided in all indoor workplaces that do not have adequate natural lighting or in which persons work at night. The emergency sources of lighting that are provided must be such that, when activated, an illuminance of not less than 0.3 lux is obtained at floor level, to enable employees to evacuate safely.

Where it is necessary to stop machinery or shut down plant or processes before evacuating the workplace, or where dangerous materials are present or dangerous processes are carried out, the illuminance must be not less than 20 lux.

Windows and translucent sheeting must be kept adequately clean and clear of obstructions as far as reasonably practicable. Light fittings, i.e. lenses and reflectors must be kept clean.

If a light intensity meter is used, a valid calibration certificate must be available.

No person may use a portable electrical light where the operating voltage exceeds 50 volts, unless:

- It is fitted with a non-hydroscopic, non-conducting handle
- All metal parts which may become live are protected against accidental contact
- The lamp is protected by means of a guard firmly attached to the handle; and
- The cable can withstand rough use.
- No person may use a portable electric light in damp or wet conditions or in closely confined spaces, inside metal vessels or when in contact with large masses of metal, unless:
- The lamp is connected to a source incorporating an earth leakage; and
- The operating voltage of the lamp does not exceed 50 volts.

11.26 Hearing Conservation

A hearing conservation program must be implemented and protection against the effects of noise exposure must be provided when the noise exposures equal or exceed an 8-hour time-weighted



average sound level of 85 decibels measured on the A-weighted scale of a standard sound level meter at slow response.

For the hearing conservation program to be effective it must include as a minimum:

- Monitoring of the workplace to determine the representative exposure of employees to excessive noise levels
- An audiometric testing program for employees, which must include:
 - w A baseline audiogram for all employees exposed to noise levels equal to or in excess of the standard
 - w Annual audiograms for each overexposed employee
 - w Analysis of audiogram results with retesting and/or referral to an otolaryngologist or qualified physician when a significant threshold shift (STS) occurs; and
 - w Written employee notification of the STS.
- A training program for all employees exposed to noise
- Provision of personal protective equipment to all affected employees when administrative or engineering controls fail to reduce sound levels to within the levels of the standards.
- Monitoring of employee exposures to noise shall be conducted by an Approved inspection Authority.

For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with legislation.

A person-task specification shall be available for every job category and shall be submitted with an employee for audiometric testing.

Audiometric testing and an annual audiogram shall be provided as part of the regular medical examinations.

Audiometric test results obtained from the pre-employment medical examination for a new employee shall be used as the baseline audiogram.

Audiometric test results shall be maintained in the employee's medical file.

To control noise exposure, its three basic elements shall be examined, i.e. source of the sound, travel path, and effect on receiver or listener. Solution of a given noise problem might require alteration or modification of any or all of these three basic elements.

Controlling noise at the noise source can be achieved by the following:

- Select quiet equipment initially.
- Reduce operating noise by considering the following control measures:
 - w Reduce impact or impulse noise by reducing weight, size, or height of fall of impacting mass
 - w Reduce frictional resistance between rotating, sliding or moving parts in mechanical systems: frequent lubrication, proper alignment of moving parts; static and dynamic balancing of rotating parts; correction of eccentricity or "out-of-roundness" of wheels, gears, rollers, pulley, etc.
 - w Reduce resistance in air or fluid systems: use of low flow velocities, smooth boundary surfaces of duct or pipe systems, and long-radius turns and flared sections in pipes, etc., to reduce turbulence noise



- w Reduce noise leakage from the interior of machines such as compressors by sealing or covering all openings or applying acoustical materials to machine interiors.

Controlling noise in the transmission path can be achieved by the following:

- Use mufflers, silencers or snubbers on all gasoline or diesel engines, regardless of size; and particularly on equipment when large quantities of high-pressure, high-velocity gases, liquids, steam or air are discharged into the open air; and
- Use vibration isolators and flexible couplers where the noise transmission path is structure borne in character.

Protection for the receiver – when engineering controls fail to reduce the levels to within the levels specified in legislation, the following measures shall be implemented:

- Personal protective equipment shall be provided and replaced as necessary at no cost to employees
- Supervisors shall ensure that hearing protective devices are worn by all employees who are exposed to a time-weighted average of 85 decibels or greater and who have experienced a significant threshold shift
- Employees shall be given the opportunity to select their hearing protectors from a variety of suitable protectors; and
- Noise zones shall be indicated by means of signs at every entrance to such zones.

When noise levels exceed 100 dB(A), a combination of earplug and earmuff may be required to achieve protection of the worker.

It is important to note that using double protection will add only 5 to 10 dB of extra attenuation above that of a single Hearing Protection Device.

Where an earmuff and earplugs are used together, OSHA recommends using this simple calculation: Take the higher rating of the two devices, and add five.

When noise levels exceed 105 dB(A), special purpose made hearing protection, like noise clippers or variphones, may be required to achieve protection of the worker.

Hearing Protection Devices should be worn for the full noise exposure period.

11.27 Fitness for Work

The contractor must develop and implement a programme to manage employee fitness for work. All employees working on site for whom the contractor is responsible (i.e. direct employees of the contractor as well as the employees of any appointed sub-contractors) must be subject to this programme.

All safety critical jobs (i.e. roles where fatigue or other causes of reduced fitness for work could lead to serious injury, illness or death to employees, significant equipment damage, or significant environmental impact) must be identified and the risks associated with reduced fitness for work in these roles must be assessed.

A programme to manage these risks must be implemented, and it must include:

- Mechanisms for managing fatigue, stress and lack of fitness
- An alcohol and other (including prescription, pharmaceutical or illicit) drugs policy that includes testing, and
- Training and awareness programmes.

Each employee has an obligation to present himself fit for work at the start of the day / shift, and to remain fit for work throughout the work period. Reporting for work under the influence of alcohol or any other intoxicating substance will not be tolerated. Any transgression concerning the



alcohol and other drugs policy applicable to the project may result in the offending employee's access to the project premises being temporarily or permanently withdrawn.

Alcohol and drug testing on the project premises will be carried out following significant incidents (all persons involved) whenever there is reasonable suspicion. Alcohol and drug testing may also be carried out as part of a Pre-Employment Medical Examination.

The contractor is responsible for the administration of the working hours of his employees as well as the employees of any appointed sub-contractors. The maximum working hours per day and the minimum rest times between shifts must be specified in the contractor's Health and Safety Management Plan and must comply with all applicable legislation.

All employees engaged must undergo fitness assessments (medical examinations) which must be carried out prior to the commencement of employment on the project, prior to a change in role, periodically based on an employee's individual risk profile, and on termination of employment on the project:

- Pre-Employment Medical Examination – to assess the physical suitability of the person for the role and environment in which he will work (carried out prior to the commencement of employment on the project and prior to induction)
- Periodic (Surveillance) Medical Examination – to assess the ongoing physical condition of an employee to determine if his role is impacting on his health and whether the employee's fitness level is still adequate for the role he holds (these medical examinations are "risk driven" – the specific protocol followed and the frequency of the examinations will depend on the applicable legal requirements and the employee's individual risk profile as determined by his personal fitness, the nature of his role / duties, and the environment in which he works / occupational health hazards to which he is exposed). The periodic medical assessment programme must include:
 - w The identification of modifiable risk factors that may impact fitness for work
 - w Education and support to maintain health or address identified risk factors; and
 - w Education and support to help employees regain their fitness for work.
- Role Change Medical Examination – to assess an employee's physical suitability for a different role and work environment (carried out prior to a change in role / duties)
- Exit (Post – Employment) Medical Examination – to determine the total physical impact of the work the employee performed (carried out on termination of employment on the project if the employee worked on the project site for more than six months).

Note: The results of an Exit Medical Examination from previous employment will not be accepted as a Pre-Employment Medical Examination.

Note: The medical examinations described above may only be carried out by an occupational medical practitioner (i.e. a medical doctor who holds a qualification in occupational medicine).

A detailed job (role) description and an exposure profile (noise, dust, heat, fumes, vapours, etc.) must be provided for each employee or group of employees. The medical examinations that an employee undergoes must be based on (i.e. the employee's fitness must be assessed against) the information contained in these documents as well as the baseline risk assessment for the work. This information must be made available to the occupational medical practitioner performing the medical examination.

For each role, the medical criteria for fitness must be documented and these must be based on an evaluation of the physical and medical requirements for the role.

Depending on the circumstances, certain vaccinations may need to be provided to employees.

The medical examinations carried out for employees that are required to work at height must include testing / questioning to determine if an individual suffers from epilepsy, hypertension (high



blood pressure) or any other medical condition deemed to be a risk (with regard to working at height) by the occupational medical practitioner.

Electricians must be tested for colour-blindness.

With regard to the placement of new employees:

- Prospective employees must be referred to a suitable occupational medical practitioner (doctor) for a “Pre-Employment Medical Examination”
- If an individual is found to be medically “unfit for placement”, the doctor will indicate which work activities cannot be performed by the person
- The individual may still be employed on the project if his medical restrictions can be accommodated and provided that no legislation is transgressed.

A process must be established to manage medical restrictions that may be placed on an employee. For every employee with a medical restriction, regular follow up visits with the occupational medical practitioner must be arranged to ensure that each case is proactively managed.

Proof of all medical examinations (i.e. certificates of fitness signed by an occupational medical practitioner) must be kept on site and these records must be readily available for inspection by the nominated project management representative.

An employee’s certificates of fitness must be included in his Personal Profile (dossier). If an Employee Personal Profile (dossier) hasn’t already been compiled for a particular employee, then this must be done without delay following the employee’s Pre-Employment Medical Examination.

No employee may commence work on site without proof that he has undergone a Pre-Employment Medical Examination.

Occupational medical examinations and data interpretation may only be carried out by medical practitioners that are appropriately qualified and certified to do so.

Occupational medical data contained in reports to management must be grouped and summarised to ensure that the confidentiality rights of each individual employee are maintained.

All occupational medical data and records must be retained for at least 40 years.

11.28 HIV / AIDS

The contractor must assess the risks posed by HIV. Appropriate mitigation strategies must be implemented as required.

Discrimination towards employees on the basis of actual or perceived HIV status is forbidden.

All information on the HIV status and condition of employees and community members, including that relating to counselling, care and treatment and receipt of benefits, must be maintained in medical confidence.

HIV / AIDS screening may not be a requirement for recruitment or a condition of employment.

11.29 First Aid

The contractor must ensure that First Aiders are trained and appointed as described below.

The contractor must ensure that a Level 1 First Aider are in place (i.e. trained and appointed) per shift, and that a First Aid Kit are provided and maintained.

11.29.1 First Aid Kits

A suitable first aid kit (i.e. appropriate to the level of training of the first aider) must be readily available to each First Aider. All kits must be provided and maintained by the contractor.

The contents of each first aid kit must be kept clean and dry. Each kit must be contained in either a portable weather-proof case / bag or a steel box mounted to a fixed structure. Access to first aid equipment / supplies must be limited to trained First Aiders only. Access to portable kit bags must be controlled and steel first aid boxes mounted in the workplace must be kept locked. Approved signage must be in place to indicate the locations of the first aid boxes / bags.



A record of each treatment administered must be kept in a suitable register.

The first aid kits must, as a minimum, contain the equipment and supplies as specified in the General Safety Regulations.

11.30 Project Close Out

The contractor must ensure that a consolidated health and safety file as contemplated in Construction Regulation 7.1.e is handed over to the client at the end of the project. This consolidated file must include all the requirements as stipulated in the regulation as well as the inclusion of all relevant documentation and proof of training flowing from the requirements of Section 10 of the OHS act.

12. Measuring and Monitoring

The contractor must develop and implement a process for regularly measuring and monitoring the key characteristics of his work activities that could have significant health or safety risks.

Procedures for measuring and monitoring occupational health exposure must include:

- Detail of what must be measured and monitored, based on a risk analysis or identified legal and other requirements
- The frequency of measurement and monitoring
- Necessary equipment
- Data quality requirements (including details on the sample size for statistical validation and any rejection criteria)
- The sampling and analysis method(s) including any laboratory certification requirements; and
- Training and competency requirements for relevant personnel who undertake workplace monitoring.
- Inspection, monitoring, measuring and test equipment must be:
 - Identified and maintained to ensure compliance with legislative requirements
 - Controlled / safe guarded from unintentional adjustments
 - Stored and protected from damage; and
 - Calibrated or verified against a traceable standard at specific intervals (records must be kept).
- Monitoring results must be collected and analysed on a regular basis for:
 - Trends and potential exceedances of legal and other requirements (such as occupational exposure limits)
 - Inconsistent or unusual results
 - Evaluating the effectiveness of existing controls
 - Conformance against stated objectives and targets; and
 - Continual improvement opportunities.

13. Non-conformance, Incident and Action Management

The contractor must establish a procedure for the management of all incidents. The procedure must outline the methodologies and processes that will be followed for:



- Recording an incident
- Investigating an incident
- Analysing the impact(s) and the potential risk of future incidents
- Communicating information concerning an incident to relevant persons / groups; and
- Managing corrective actions to prevent a reoccurrence.

This procedure must be communicated to all personnel through awareness training.

Note: Arrangements must be in place to ensure that proper medical care is provided to any contractor (or sub-contractor) employee that suffers an occupational injury or illness. These arrangements must be described in the contractor's Health and Safety Management Plan.

An incident may have multiple impacts. For each impact, the Actual Consequence and the Maximum Reasonable Outcome must be evaluated. Each impact must be evaluated independently, with the most significant classification forming the primary rating of the incident.

All Near Miss events must be reported as incidents.

The contractor must report each incident that occurs (including Near Misses) to the nominated project management representative without delay (i.e. immediately). Preliminary details must be recorded on the same work day / shift on which an incident occurs.

The contractor must investigate each incident (including Near Misses) to a level of detail that is appropriate for the Maximum Reasonable Outcome of the incident.

All significant incidents (i.e. incidents with any impact categorised with an Actual Consequence of Serious, Major or Catastrophic, or a Maximum Reasonable Outcome of High or Critical) must be investigated using a recognised root cause methodology.

For all other incidents (i.e. incidents with impacts classified as having a Low or Moderate Maximum Reasonable Outcome), other methodologies may be used to determine the root cause and to identify corrective and / or preventative actions.

Incident investigations must be facilitated by personnel who have been trained in the appropriate methodology.

Investigations into significant incidents must involve the active participation of the contractor's Project Manager, Health and Safety Officer(s), and relevant Supervisors. Nominated project management representatives may participate in the investigation.

The contractor must document the results of each investigation and a report must be submitted to the nominated project management representative within five working days of the incident occurring.

As a minimum, each incident report must include:

- The date, time and location of the incident
- A detailed description of the incident, including photographs
- The names of any injured persons
- Injury details (if applicable)
- A summary of the first aid / medical treatment provided (if applicable)
- The current status of any injured persons
- The root causes of the incident; and
- Detailed corrective and preventative actions, including responsible persons and target dates for implementation.



Note: The contractor remains responsible for meeting any statutory reporting requirements concerning incidents and injuries.

Each significant incident must be summarised for its lessons learnt following the investigation. This information must be reviewed by the nominated project management representative to assure completeness, accuracy and relevance before it is communicated to all employees.

The contractor must establish a process for identifying and recording corrective and preventative actions arising from:

- Incident investigations
- Hazard identification and risk management
- Measurement and monitoring
- Improvement plans and suggestions
- Managing change
- Audits and inspections; and
- The contractor must establish a procedure for managing actions that addresses:
 - Identification, categorisation and prioritisation of actions
 - Formal evaluation and approval of actions
 - Assignment of responsibilities, resources and schedules for implementation
 - Implementation of actions
 - Tracking and reporting against implementation
 - Monitoring and verifying the effectiveness of the actions
 - Analysing trends and communicating performance with regard to closing actions; and
 - Communication concerning the status of actions.

14. Data and Records Management

The contractor must establish a procedure for the systematic control of health and safety records and related data.

Records must be legible, identifiable and traceable and must contain the appropriate amount of data and information to demonstrate conformance to measuring and monitoring requirements.

The confidentiality and security of data and records must be maintained relative to their source and in accordance with any applicable external data / privacy protection legislation.

Personal information originating from medical surveillance and occupational hygiene monitoring must be reported in a form that respects the privacy of the individual, but enables management to fulfil their duty of care obligations to employees. The names of individuals must not be disclosed without their written authorisation.

Medical examination reports must be dated and signed by the examining physician, nurse or equivalent. They must be legible and include a printed name to assist with identification and authentication of the results (electronic signature is acceptable).

Retention periods for all records must be established and documented.



15. Performance Assessment and Auditing

15.1 Audits and Inspections

On a monthly basis, the Appointed Construction Health and Safety Agent will audit the activities of the contractor to measure compliance with the requirements of this specification as well as the contractor's Health and Safety Management Plan. Any deviation from the requirements of these documents (i.e. non-conformance) that places the health or safety of any person in immediate danger will result in the specific activity being stopped until the non-conformance is corrected. Any cost incurred as a result of such a work stoppage will be for the contractor's account.

For each non-conformance determined during any audit, the contractor must identify and implement appropriate corrective actions. For each corrective action, a responsible person must be designated and an appropriate timeframe (target date) for completion of the corrective action must be specified. Progress on implementing corrective actions (i.e. closing non-conformances) must be monitored by the contractor and reported to the nominated project management representative on a weekly basis. The implementation of corrective actions will be verified by the Appointed Construction Health and Safety Agent during the monthly audits.

Should it be determined that the contractor's level of compliance is unsatisfactory, all work being performed by the contractor on the project site may be stopped (at the contractor's expense) until a full investigation into the reasons for the poor performance has been carried out, a corrective action plan has been developed, and corrective actions have been implemented to the satisfaction of the nominated project management representative. It may be required that the corrective action plan be signed off by the contractor's managing director with assurance that he will personally ensure the implementation of the corrective actions.

On a monthly basis (prior to the audit carried out by the Appointed Construction Health and Safety Agent), the contractor must carry out an internal audit to assess compliance with the requirements of this specification as well as his own Health and Safety Management Plan. The contractor must ensure that his sub-contractors are audited and measured to the same standard. Copies of these audit reports must be submitted to the nominated project management representative on a monthly basis. The contractor must allow a nominated project management representative to attend any such audit.

The contractor must carry out internal health and safety inspections as follows:

- General site health and safety inspections on a daily basis; and
- Inspections of plant, tools and equipment prior to establishment / use on site, and at least monthly thereafter.

All audits and inspections must be carried out by competent persons who must be appointed in writing.

The contractor must compile and maintain a schedule of planned audits and inspections. When compiling the schedule, the contractor must ensure that:

- All work areas and all activities are covered at regular intervals
- All applicable legal requirements are complied with; and
- Areas or activities with significant associated hazards or risks receive greater attention.

C3.5: CONTRACT AND STANDARD DRAWINGS**C3.5.1 CONTRACT DRAWINGS / DETAILS****C3.5.2 STANDARD DRAWINGS**

The Standard Drawings to which these Standard Engineering Specifications refer are listed below.

Dwg No	Description	Date of Issue	
38570	Ring Manholes	February	1990
38571	Brick Manhole Details	February	1990
38572	Stormwater Inlet Details	February	1990
38573	Stormwater Inlet Special Details	February	1990
38574	Sewer Manholes: Ramp, Backdrop and Channelling Details	February	1990
38575	Sub-Soil Drain, Pipe Bedding and Pipe Protection Details	February	1990
38576	Headwall Details	February	1990
38577	Kerbing Details	February	1990
38578	Concrete Median Barriers	February	1990
38579	Vehicular and Pedestrian Scoops	February	1990
38580	Concrete Bollard and Steel Guard Rail	February	1990
38581	Retaining Wall, PC Steps, Staircase, Cable Ducts and Headwalls	February	1990
38582	Precast Concrete Fencing and Aluminium Gates	February	1990
38583	Wire Mesh Fence and Gate Details	February	1990
38584	Standard Hydrant Thrust Blocks and Trenches	February	1990
38585	Water Connections, Pipework and Fittings	February	1990
38586	DP & TC Manholes - Rectangular	February	1990
38587	DP & TC Manholes - "L" Shaped	February	1990
38588	DP & TC Manholes - "T" Shaped	February	1990
38589	DP & TC Cable Ducts and Junction Box Details	February	1990
43120	Typical Details of Grid Inlets	February	1990

C3.6: ANNEXURES

The following annexures are found in the separate folders not forming part of this document:

C3.6.1 – Architectural Drawings and Specifications**C3.6.2 – Structural Drawings and Specifications****C3.6.3 – Electrical & Mechanical Drawings and Specifications**

PART C4: SITE INFORMATION

C4.1 LOCALITY PLAN

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