

ADDITIONAL CLAUSES

Form of Offer

The Form of Offer to be used shall be the Offer bound in this document, which is not necessarily the same as the attached to the published version of the General Conditions of Contract.

Form of Acceptance

The Form of Acceptance to be used shall be the Acceptance bound in this document, which is not necessarily the same as that attached to the published version of the General Conditions of Contract.

Pro forma- Performance Guarantee

The Performance Guarantee shall be in the form bound in this document, which is not necessarily the same as that attached to the published version of the General Conditions of Contract.

C.1.2.3. Compulsory Data

Clause 1.1.1.13: Defects Liability Period is 6 months
Clause 1.1.1.14: The time for achieving Practical Completion is 6 months.

A. DATA TO BE PROVIDED BY THE EMPLOYER

REF. CLAUSE NO DATA BY EMPLOYER

Clause 1.1.1.15: **Name of Employer:** DR. NKOSAZANA DLAMINI ZUMA LOCAL MUNICIPALITY

Clause 1.1.1.26: **The Pricing Strategy is Fixed Contract.**

Clause 1.2.1.2: **Address of Employer:**
Physical: Main Street Creighton 3263
Postal: P/Box 62 Creighton 3263

Telephone No: (039) 833 1038
Fax No: (039) 833 1179

Clause 1.1.1.16: **Name of Engineer:** MASAKHEKULUNGE PROJECT MANAGERS

Clause 1.2.1.2 **Address of Engineer:**
Physical: 18602 Marine Drive Manaba 4275
Postal: P O Box 464 Margate 4275

E-mail: admin@masakhekulunge.co.za
Telephone No: 039 312 0856
Fax No: 086 527 3071

Clause 5.3.1: The documentation required before commencement with Works execution are:

- Health and Safety Plan (Refer to Clause 4.3)
- Initial programme (Refer to Clause 5.6)
- Security (Refer to Clause 6.2)
- Insurance (Refer to Clause 8.6)

Clause 5.3.2: The time to submit the documentation required before commencement with Works execution is 14 days.

Clause 5.8.1: The non-working days are: Sundays
The special non- working days are:

- 1) All statutory holidays as declared by National/ Regional Government
- 2) The year-end break commencing on 15th December and ending on 10th January of Next year.

Clause 5.13.1: The penalty for failing to complete the Works is **R5 000 per calendar day** until completion is reached

- Removal of plant from site without engineers consent – **R 2 000 per calendar day**
- Late payment of local labour by 30 days from date of payment – **R 2 000 per calendar day**

Clause 5.16.3: The latent defect period is 10 years for civil engineering works

Clause 6.10.1.5: The percentage advance on materials not yet built into the Permanent Works is 80%

Clause 6.10.3: The retention money is 10% of the contract value. This retention will be released in two stages, i.e. at practical completion stage and after the defects liability period has lapsed. This emphasizes that the municipality will release 5% at the final claim.

Clause 8.6.1.1.3: The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R 100 000.00

Clause 8.6.1.3: The limit of indemnity for liability insurance is R2 000 000.00

B: DATA TO BE PROVIDED BY CONTRACTOR

REF. CLAUSE No DATA BY CONTRACTOR

Clause 1.1.1.9: **Name of Contractor:**

Clause 1.2.1.2: **Address of Contractor:**

Physical:..... **Postal:**.....

.....

E-mail:

Telephone No.:..... **Fax No.:**

4.6.3 The variations in cost of special materials will be based on the following:

<u>Special Material</u>	<u>Unit</u>	<u>Rate or Price</u>
.....
.....
.....

C1.3: FORM OF GUARANTEE

C1.3.1: PERFORMANCE GUARANTEE

For use with the General Conditions of Contract for Construction Works, Second Edition 2010.

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:

Physical address:

"Employer" means:

"Contractor" means:

"Engineer" means:

"Works" means:

"Site" means:

"Contract Sum" means: The accepted amount inclusive of tax of R.....

"Amount in words:

"Guaranteed Sum: means: The maximum aggregate amount of R.....

Amount in words:

"Expiry Date" means:

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

PERFORMANCE GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
2. The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certification of Completion of the Works has been issued.
3. The Guarantor hereby acknowledges that:
 - 3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intension whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;

- 3.2 Its obligation under this Performance Guarantee is restricted to the payment of money.
4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
 - 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in a n Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
 - 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contract stating that a period of seven (7) days has elapsed since the first written demand I terms of 4.1 and the sum certified has still not been paid;
 - 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
5. Subject to the Guarantor's maximum liability referred to in 1, The Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
 - 5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
 - 5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
 - 5.3 The aforesaid written demand is accompanied by a copy of the notice of termination and or the provisional/ final sequestration and/or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
8. Payment by the Guarantor in terms of 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release form this Performance Guarantee on account of any conduct

alleged to be prejudicial to the Guarantor.

11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
12. This Performance Guarantee is neither negotiable nor transferable and shall expired in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as liquid document for the purposes of obtaining a court order.
14. Where this Performance Guarantee is issued in the Republic of South African the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No.32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at.....

Date.....

Guarantor's signatory (1)

Capacity.....

Guarantor's signatory (2).....

Capacity.....

Witness signatory (1).....

Witness signatory (2).....

C1.4: ADJUDICATOR'S CONTRACT

C.1.4.1: DISCLOSURE STATEMENT

Contract : _____

Contractor : _____

Employer : _____

Engineer : _____

Dear Sirs

I am willing available to serve as (*ad-hoc/standing*) Adjudication Board Member in the above-mentioned Contract.

In accordance with the General Conditions of Contract for Construction Works Adjudication Board Rules relating to disclosure statements by selected or nominated persons to the adjudication, I hereby state that:

I shall act with complete impartiality and know of nothing at this time, which could affect my impartiality.

I have had no previous involvement with this project.

I do not have any financial interest in this project.

I am not currently employed by the contractor, Employer or Engineer.

I do not have any financial connections with the Contractor, Employer or Engineer.

I do not have or have not had a personal relationship with any authoritative, member of the Contractor, Employer or the Engineer which could affect my impartiality.

I undertake to immediately disclose to the parties any changes in the above position which could affect my impartiality or be perceived to affect same.

Should there be any deviation from foregoing statements, details shall be given.

I further declare that I am experienced in the work which is carried out under the Contract and in interpreting contract documentation.

Name in full: _____

Signature: _____

C1.4.2: ADJUDICATION BOARD MEMBER AGREEMENT

This Agreement is entered into between:

Adjudication Board Member:

Contractor:

Employer

The contractor and the Employer will hereinafter be collectively referred to as the Parties.

The parties entered into a contract for which provides that a dispute under or in connection with the General Condition of Contract for Construction Works, Second Edition 2010, must be referred to

The undersigned natural person has been appointed to serve as Adjudication Board Member and together with the undersigned Parties agree as follows:

1. The Adjudication Board Member accepts to perform his duties in accordance with the terms of the Contract, the General Condition of Contract for Construction Works Adjudication Board Rules and Agreement.
2. The adjudicator undertakes to remain independent and impartial of the Contractor, Employer and Engineer for the duration of the Adjudication board proceedings.
3. The Adjudication Board Member agrees to serve for the duration of the Adjudication Board proceedings.
4. The parties may at any time, without cause and with immediate effect, jointly terminate this Agreement.
5. Unless the Parties agree, the Adjudication Board Member shall not act as arbitrator or representative of either Party in any subsequent proceedings between the Parties under the contract. No Party may call the Adjudication Board Members as a witness in any such subsequent proceedings.
6. The standing Adjudication Board's duties shall end upon the Adjudication Board Member(s) receiving notice from the Parties of their joint decision to disband the Adjudication Board.
7. The Adjudication Board Member shall be paid in respect of time spend upon or in connection with the Adjudication including time spent travelling:
 - a. A monthly retainer of for of months, and / or
 - b. A daily fee of based on a hour day, and/or
 - c. A hourly fee of, and/or
 - d. A non – recurrent appointment fee of which shall be accounted for in the final sums payable

8. The Adjudication Board Member's expenses incurred in adjudication work shall be reimbursed at cost

Upon submission of an invoice for fees and expenses to the Parties, the shall pay the full amount within 28 days of receipt of the invoice and he shall be reimbursed by the other party by half the amount so that the fees and expenses are borne equally by the Parties. Late payment of such invoice shall attract interest at prime plus 3% points compounded monthly at the prime rate charged by the Adjudication Board Member's bank.

This Agreement is entered into by:

Contractor's signature:
Contractor's name:.....
Place:
Date:.....

Employer's signature:
Employer's name:.....
Place:
Date:

Adjudication Board Member's signature:
Adjudication Board Member's name:.....
Place:
Date:

**Delete the inapplicable part*

**C1.5: AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH
AND SAFETY ACT No 85 OF 1993**

THIS AGREEMENT is made between

(hereinafter called the EMPLOYER) of the one part, herein represented by:

.....
.....
in his capacity as:

AND:
.....

(hereinafter called the CONTRACTOR) of the other part, herein represented
by

.....
.....
in his capacity as:

duly authorized to sign on behalf of the Contractor.

WHEREAS the CONTRACTOR is the Mandatory of the EMPLOYER in consequence of an agreement between the CONTRACTOR and the EMPLOYER in respect of

CONTRACT NO.: _____ : **Creighton Sports Centre; Construction of Artificial Turf Grass (phase 2)In Ward 14, for the construction, completion and maintenance of the works;**

AND WHEREAS the EMPLOYER and the CONTRACTOR have agreed to enter into an agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993, as amended by OHS Act No 181/1993 (hereinafter referred to as the ACT);

NOW THEREFORE the parties agree as follows:

1. The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.
2. The CONTRACTOR undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations: Provided that should the EMPLOYER have prescribed certain arrangements and procedures that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
3. The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures, if any, imposed by the ACT and Regulations, and the CONTRACTOR expressly absolves the

EMPLOYER and the Employer's CONSULTING ENGINEERS from being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedures in respect of the work included in the contract.

4. The CONTRACTOR agrees that any duly authorized officials of the EMPLOYER shall be entitled, although not obliged, to take such steps- as may be necessary to ensure that the CONTRACTOR has complied with his undertakings as more fully set out in paragraphs 1 and 2 above, which steps- may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to take such steps- it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.

5. The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Thus signed at day of for and on behalf of the
CONTRACTOR on this the day of 20.....

SIGNATURE:
.....

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.
2.

Thus signed at for and on behalf of the **EMPLOYER**
on this day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.
2.

C2: PRICING DATA

C2.1 PRICING INSTRUCTIONS

1 Measurement and payment shall be in accordance with the relevant provisions of clause 8 of each of the SABS 1200 Standardized Specifications for Civil Engineering Construction referred to in the Scope of Work. The Preliminary and General items shall be measured in accordance with the provisions of SABS 1200-A, *General*.

2. The units of measurement described in the Bills of Quantities are metric units. Abbreviations used in these Bills of Quantities are as follows:

%	=	percent
h	=	hour
ha	=	hectare
kg	=	kilogram
kl	=	kiloitre
km	=	kilometre
km-pass	=	kilometre-pass
Pa	=	kilopascal
kW	=	kilowatt
l	=	litre
m	=	metre
mm	=	millimetre
m ²	=	square metre
m ² -pass	=	square metre-pass
m ³	=	cubic metre
m ³ -km	=	cubic metre-kilometre
MN	=	meganewton
MN.m	=	meganewton-metre
MPa	=	megapascal
No.	=	number
Prov sum	=	Provisional sum
PC sum	=	Prime Cost sum
R/only	=	Rate only
sum	=	lump sum
t	=	ton (1000 kg)
W/day	=	Work day

3. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

4. The prices and rates in these Bills of Quantities are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices will be used as a basis for assessment of payment for additional work that may have to be carried out.

5. It will be assumed that prices included in these Bills of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org.za or www.iso.org for information on standards)

2.1 PRICING INSTRUCTION

PRICING DATA

6. Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered such items
7. The quantities set out in these Bills of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bills of Quantities.
8. Reasonable compensation will be received where no pay item appears in respect of work required in the Bills of Quantities in terms of the Contract and which is not covered in any other pay item.
9. The short descriptions of the items of payment given in these Bills of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.
10. Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the SABS 1200 Standardised Specifications.
11. All prices and rates entered in the Bill of Quantities must be excluding Value Add Tax (VAT) will be added last on the summary page of the Bill of Quantities
12. Those parts of the contract to be constructed using labour-intensive methods have been marked in the Bills of Quantities with the letters LI in a separate column filled in against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items marked with the letters LI are not necessarily an exhaustive list of all the activities, which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour-intensive specification in the Scope of Works.
13. Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.
14. All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will lead the Tenderer to be disqualified. **Bracketing of rates, failure to complete items on the bill of quantities and leaving items blank or dashed will also lead to the tenderer to be disqualified.**
15. Only a rand value, nil and zero will be considered in the bill of quantities.

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY
CONTRACT No.: PWBS-B025/22/23
Construction of Creighton Sports Centre (phase 2)

2.1 PRICING INSTRUCTION

PRICING DATA

C2.2 : BILLS OF QUANTITIES

C3: SCOPE OF WORK

C3.1 DESCRIPTION OF THE WORKS

C3.1.1 EMPLOYERS OBJECTIVES

The employer's objectives are to deliver public infrastructure using labour intensive methods.

C3.1.2 OVERVIEW OF THE WORKS

The scope of work will involve the formalization of an existing sports centre. Included on the scope of work are:

- Construction of (120m x 90m) marked soccer pitch complete with artificial grass, goal posts with nets
- Construction of (30m x 17m) netball/ basketball combo court with asphalt topping including poles with nets and marking.
- Borehole installation complete with accessories

C3.1.2.1 Extent of the Works

The extent of work involved the followings:

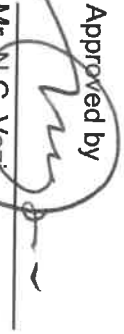
- a) Site clearance and bulk earthworks
- b) Grassed Field (120m x 90m) with poles with nets including marking
- c) Combo-court (30 x 17m)
- d) Borehole installation

Recommended by


Mr. S.V. Mingadi

Senior Manager: Public Works and Basic Services

Approved by


Mr. N.C. Vazi

Municipal Manager

C3.1.2.2 Location of the Works

The Creighton Sports Centre is situated in Dr. Nkosazana Dlamini Zuma Local Municipality, Ward 14, at Creighton village in KwaZulu Natal Province which is approximately 47km from Dr. Nkosazana Dlamini Zuma Municipal offices in Creighton. The closest town to the project is Donnybrook which is 38km. It has the following description:

Project name	Nearest town	Latitude	Longitude
Creighton Sports Centre (phase 2)	Creighton: Approximately 1,5km	30° 02' 03,71" S	29° 50 20.90" E

C3.1.3 Labour Intensive Construction

Labour-intensive works comprise the activities described in SANS 1921-5, *Earthworks activities which are to be performed by hand*, and its associated specification data. Such works shall be constructed using local workers who are temporarily employed in terms of this Scope of Work.

Labour Intensive Construction shall mean the economically efficient employment of as great a portion of labour as is technically feasible to produce a standard of construction as demanded by the Specifications with completion by the Due Completion Date, thus the effective substitution of labour for equipment.

Appropriate portions of the Works included in the Contract shall be executed using Labour Intensive Construction methods.

Except where the use of plant is essential in order, in the opinion of the Engineer, to meet the specified requirements by the Due Completion Date, the Contractor shall use only hand tools and equipment in the construction of those portion(s) of the Works that are required in terms of these Project Specifications to be constructed using Labour Intensive Construction methods.

These portions of the Works shall be constructed utilizing only locally employed labour and/or the labour of local sub-contractors, supplemented to the extent necessary and unavoidable by the Contractors key personnel as provided for in sub-clause C3.3.3 unless otherwise instructed by the Engineer and in accordance with the further provisions of the relevant sections of Portion B of the Project Specifications.

The portions of the Works to be executed using Labour Intensive Construction methods are:

- Clearing and grubbing of the Site;
- Excavation for structures up to 1,5 m deep;
- Transportation and spoiling of all trench materials, where the disposal site is located within 1km of source;
- Cleaning and tidying up of the Site;
- Construction of all brickworks required for structures;
- Mixing and placing of concrete work;
- Precast concrete siting
- Plantation of grass for soccer pitch

In respect of those portions of works which are not listed above, the construction methods adopted and plant utilized shall be at the discretion of the Contractor, provided always that the construction methods adopted and plant utilized by the Contractor are appropriate in respect of the nature of the Works to be executed and the standards to be achieved in terms of the Contract.

C3.1.4 Sub-Contracting

C3.1.4.1 Contractor shall appoint such authorities and/or specialist subcontractors and suppliers as may be designated or nominated by the Employer or the Engineer.

C3.1.4.2 The Contractor shall sub-let to local small sub-contractors appropriate portions of the works that are designated in Clause C3.1.3 as being reserved for labour intensive construction methods.

C3.1.4.3 As required by Clause 6(4) of the Conditions of Contract, the Contractor shall be

responsible for all work carried out by sub-contractors (whether nominated by the Employer or selected by the Contractor) on his behalf. The Engineer will not liaise directly with any such sub-contractor, nor will he become involved in any problems and/or disputes related to payments, programming, workmanship, etc, unless provided for in the Conditions of Contract. Such problems and/or disputes shall remain the sole concern of the Contractor and his sub-contractors.

C3.1.4.4

The Engineer may at his discretion, upon receipt of a written and fully motivated application from the Contractor, and where he deems the circumstances so warrant, and provided always that the Contractor has complied fully and in all respects with the provisions of the Contract pertaining to subletting to local sub-contractors or has utilized his best endeavors to comply therewith, authorize in writing that the Contractor may employ local residents with the sole intent of executing on-the-job training of such local residents to suitable levels of skill that will enable the Contractor to sub-let appropriate portions of the Works to such local residents.

Without limiting the generality of application of this sub-clause, circumstances, which may be considered by the Engineer to warrant such authorization, include:

- a) non-receipt of valid or acceptable tenders/quotations from local sub-contractors;
- b) Serious default or failure of appointed local sub-contractors;

The Engineer shall not grant such authority in cases where it may reasonably be concluded on the available evidence that the invitation of further tenders/quotations in accordance with the terms of the Contract is likely to result in the successful completion of the portions of the Works concerned by local sub-contractors.

Should the Contractor, after suitable due endeavor, be unable to identify local residents suitable for and desiring to train as sub-contractors for portions of the Works as specified in Clause 3.1.4.2, then the Contractor shall be permitted to undertake the Works in question with his own workforce as provided for in Clause 3.3.3 above.

The Engineer shall monitor progress achieved with subcontractor training, and successful completion of this training shall be subject to his approval or instruction. The Contractor shall tender rates for the training of sub-contractors and labour.

As specified in Clause C3.3.4, the Contractor shall approach the Labour Desk that is established for purposes of the Contract for assistance and advice regarding conditions of employment, minimum wages, disputes and disciplinary procedures in respect of local sub-contractors.

C3.1.5 CONSTRUCTION AND MANAGEMENT REQUIREMENTS

C3.1.5.1 General

The Contractor is referred to SANS 1921: 2004 parts 1, 2, 3 and 5: Construction and Management Requirements for Works Contracts. These specifications shall be applicable to the contract under consideration and the Contractor shall comply with all requirements relevant to the project.

Certain aspects however require further attention as described hereafter.

C3.1.5.2 Quality Assurance (QA) (Read with SANS 1921 – 1: 2004 clause 4.4)

The Contractor will be solely responsible for the production of work that complies with the Specifications to the satisfaction of the Engineer. To this end it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) system on site. The Engineer will audit the Contractor's quality assurance (QA) system on a regular basis to verify that adequate independent checks and tests are being carried out and to ensure that the Contractor's own control is sufficient to identify any possible quality problems, which could cause a delay or failure.

The Contractor shall ensure that efficient supervisory staff, the required transport, instruments, equipment and tools are available to control the quality of his own workmanship in accordance with his QA-system. His attention is drawn to the fact that it is not the duty of the Engineer or the Engineer's representative to act as foreman or surveyor.

C3.1.5.3 Management and disposal of water (Read with SANS 1921 - 1: 2004 clause 4.6)

The Contractor shall pay special attention to the management and disposal of water and stormwater on the site. It is essential that all completed works or parts thereof are kept dry and properly drained. Claims for delay and for repair of damage caused to the works as a result of the Contractor's failure to properly manage rain and surface water, will not be considered.

C3.1.5.4 Disposal of spoil or surplus material (Read with SANS 1921 - 1: 2004 clause 4.10)

The Contractor shall dispose all surplus and unsuitable material in legal spoil areas of his own choice. He shall be responsible for all arrangements necessary to obtain such spoil sites.

C3.1.5.6 Testing (Read with SANS 1921 – 1: 2004 clause 4.11)

Process control

The Contractor shall arrange for all tests required for process control to be done by a laboratory acceptable to and approved by the Engineer.

The Contractor may establish his own laboratory on site or he may employ the services of an independent commercial laboratory. Whatever method is used, the Contractor must submit the results of tests carried out on materials and workmanship when submitting work for acceptance by the Engineer. The costs for these tests shall be deemed to be included in the relevant rates and no additional payment will be made for testing as required.

Acceptance control

The process control test results submitted by the Contractor for approval of materials and workmanship may be used by the Engineer for acceptance control. However, before accepting any work, the Engineer may have further control tests carried out by a laboratory of his choice. The cost of such additional tests will be covered by a provisional sum provided in the schedule of quantities, but tests that failed to confirm compliance with the specifications, will be for the account of the Contractor.

C3.1.5.7 Survey beacons (Read with SANS 1921 - 1: 2004 clause 4.15)

The Contractor shall take special precautions to protect all permanent survey beacons or pegs such as benchmarks, stand boundary pegs and trigonometrical beacons, regardless whether such beacons or pegs were placed before or during the execution of the Contract. If any such beacons or pegs have been disturbed by the Contractor or his employees, the Contractor shall have them replaced by a registered land surveyor at his own cost.

C3.1.5.8 Existing Services (Read with SANS 1921 - 1: 2004 clause 4.17)

The Contractor shall make himself acquainted with the position of all existing services before any excavation or other work likely to affect the existing services is commenced.

The Contractor will be held responsible for any damage to known existing services caused by or arising out of his operations and any damage shall be made good at his own expense. Damage to unknown services shall be repaired as soon as possible and liability shall be determined on site when such damage should occur.

C3.1.6 Programme to be supplied by the Contractor

The Contractor's programme shall be essentially in accordance with the overall requirements of the project.

The programme shall not be in the form of a bar chart only, but shall show clearly the anticipated quantities of work to be performed each month, together with the manner in which the listed plant and other resources are to be used, as well as the anticipated earnings for the various sections of work.

A network-based programme according to the precedence method shall be required by the Engineer. The programme shall be updated monthly in accordance with the progress made by the Contractor. The updated programme shall be submitted to the Engineer at least two working days prior to monthly meetings.

Failure to comply with these requirements will entitle the Engineer to use a programme based on his own assumptions for the purpose of evaluating claims for extension of time or additional payments.

If, during the progress of the work, the quantities of work performed per month fall below those shown on the programme, or if the sequence of operations is altered or if the programme is deviated from in any other way, the Contractor shall, within one week of having been notified by the Engineer, submit a revised programme and network.

If the programme has to be revised by reason of the contractor falling behind his programme, he shall produce a revised programme showing how he intends to regain lost time in order to ensure completion of the Works within the time of completion as defined in Clause 53 of the General Conditions of Contract or any granted extension of time. Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by providing more labour and plant on site, or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to submit the programme or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as provided in Clause 55 of the General Conditions of Contract.

The approval by the engineer of any programme shall have no contractual significance other

than the Engineer will be satisfied if the work is carried out according to such programme and that the Contract undertakes to carry out the work in accordance with the programme. It shall not limit the right to the Engineer to instruct the Contractor to vary the programme if required by circumstances. The Contractor is also referred to Clause 12 of the General Conditions of Contract when drawing up his programme.

Progress in advance of the programme on certain portions or phases of the Works shall not be considered adequate reason for poor progress on another portion or phase.

C3.1.7 Overhaul

No payment will be made for overhaul on this contract unless provision is made therefore in specific items.

C3.1.8 Site Facilities Available

C3.1.8.1 Location of Site and Depot

The Contractor is responsible to provide a suitable site for his camp and to provide accommodation for his personnel and labourers. If the Employer can make any specific site available to the Contractor, such site will be pointed out to the Contractor. The Contractor must obtain written permission from the landowner and subsequently from the Engineer for the establishment of his camp.

(a) Contractor's Camp Site/Store Yard

Any clearing of the site that is necessary and the making good after de-establishment will be the responsibility of the Contractor.

In addition to the requirements of SABS 1200A clause 8.3.2.2 the following conditions shall also apply:-

- (i) None of the existing roads shall be damaged in any way.
- (ii) No waterborne sewerage facilities or potable water connection are available on the site. The Contractor shall make his own arrangements in this regard.
- (iii) No electrical facilities exist on site.
- (iv) It shall be the responsibility of the Contractor to make good any damage caused to the campsite area or any improvements on it, including services, and for reinstating it to its former condition when vacated. The standard of reinstatement must be to the satisfaction of the Engineer; Director: Real Estate and/or Director of Parks, Recreation and Beaches Department; or other owner. Particular attention should be directed to these requirements and written clearances from the relevant Departments or other owners will be required.

C3.1.8.2 Source of Water Supply

The Contractor shall be responsible under the Contract for the supply and distribution at his cost of all water that he may require for purposes of constructing the Works. Accordingly, the Contractor shall pay all connection fees and consumption charges, and at his cost provide all connections, consumption meters, pipework, storage tanks, transport and other items associated with the supply of water for the Works.

The Contractor shall, subject to the approval of the Engineer, make any necessary arrangements with the relevant authority for the connection(s), and shall provide in his tender

for the payment of all charges and costs that are associated with making water available for purposes of constructing the Works.

C3.1.8.3 Source of Power Supply

The Contractor shall be responsible under the Contract for the supply and distribution at his cost of all electricity that he may require for purposes of constructing the Works. Accordingly, the Contractor shall pay all connection and consumption charges, and at his cost provide all connections, transformers, consumption meters, cables, distribution boards and other items that are associated with the supply of electricity for construction of the Works.

The Contractor shall, subject to the approval of the Engineer, make any necessary arrangements with the relevant authority for the connection(s), and shall provide in his tender for the payment of all charges and costs that are associated with making electricity available for purposes of constructing the Works. The distribution of electricity shall be in accordance with the applicable bylaws and regulations of the supply authority.

C3.1.8.4 Accommodation of Employees

No employees except for security guards will be allowed to sleep or be accommodated on the site.

No housing is available for the Contractor's employees and the Contractor shall make his own arrangements to house his employees and to transport them to site.

No informal housing or squatting will be allowed.

The Contractor shall provide the necessary ablution facilities at his campsite and the site of the works for the use of his employees. Chemical toilets only will be allowed where temporary facilities have to be provided.

C3.1.9 Features Requiring Special Attention

C3.1.9.1 Built-up Areas

The Contractor's attention is drawn to the fact that the Works will be constructed within built-up areas. The Contractor shall exercise all necessary precautions and take all necessary steps to ensure the safety and convenience of the public. In addition, the Contractor shall provide access for traffic over and through the works, and for residents to their places of abode, all as described in the Specifications. Allowance must be made by the Contractor in his programming for delays resulting from the aforesaid.

The Contractor shall give residents a minimum of 72 hours written notice of his intent to close access to residential stands. The Contractor shall acquire written confirmation from all owners that they are aware of any intended closures of access. No traffic access to a residential stand shall be closed for longer than 48 hours.

C3.1.9.3 Protection of Buildings and Structures

The Contractor shall give all residents or other parties owning a building or structure within an appropriate radius (not less than 100m) from any point of blasting, a minimum of 48 hours notice of his intent to execute any blasting work.

The Contractor shall note all aspects relevant to the condition of the affected buildings and/or structures prior to blasting and shall acquire the signature of the owners/occupants agreeing to such conditions.

Subsequent to blasting, both the Contractor and the owners/occupants shall sign the form confirming the condition of the buildings and/or structures. In the event of damage to existing buildings and/or structures as a result of blasting, remedial work shall be done to the satisfaction of the owners/occupants at the Contractor's expense.

Compliance with this clause will not relieve the Contractor of any of his responsibilities in terms of the Contract.

C3.1.9.4 Care of the Site

At all times during construction of the Works and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store all materials and equipment for which he is responsible in an orderly manner and shall keep the Site free from debris and obstructions.

C3.1.9.5 Control of Water

The Contractor shall at all times and in all respects be responsible for the handling of stormwater from higher-laying areas above the Works, and for the handling of any sub-surface water that may affect the Works. No separate payment shall be made in this regard, as all costs related thereto shall be deemed to be included in the rates tendered for the various items of work that are included in the Schedule of Quantities.

C3.1.10 Management of the environment

The Contractor shall pay special attention to the following:

(a) 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 Engineer 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.

(b) 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.

C3.1.11 Community Liaison and Community Relations

In all dealings with nearby communities and beneficiaries of the project, and in all dealings with workers employed from within such communities, the Contractor shall take due cognizance of the character, culture and circumstances of the specific community and/or any group of beneficiaries, and shall at all times use his best endeavors to avoid the development of disputes and rather to foster a spirit of co- operation and harmony towards the project.

The Contractor shall at all times, keep the Engineer fully informed regarding all matters affecting or negotiated between the Contractor and the community and/or beneficiaries, and he shall attend all liaison meetings as may be arranged by the Engineer and/or the Employer. All matters concerning the community and/or beneficiaries shall be discussed and where possible, resolved

at such meetings.

Where any resolution during such negotiations or at such meetings shall be contrary to the terms and provisions of the Contract, the Contractor shall not give effect thereto without a prior written instruction from the Engineer.

Where the Contractor is of the opinion that any instruction of the Engineer issued in terms of this clause will result in the incurring of additional costs which were not provided for in his tendered rates and prices and/or that a delay in the progress of the Works will result, he shall be entitled to submit a claim in terms of Clause 48 of the Conditions of Contract, provided always that the period of twenty-eight (28) days referred to in Clause 48 shall be reduced to three (3) normal working days in respect of all claims submitted in terms of this clause.

C3.1.12 Workmanship and Quality Control

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and of the Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality-control system and provide experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the quality of the Works at all stages of the Contract.

The cost of the Contractor's supervision and process control, including all testing carried out by the Contractor, will be deemed to be included in the rates tendered for the various items of work. The Contractor's attention is drawn to the provisions of the various Standardized Specifications regarding the minimum frequency of process control testing that is to be executed. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control of the quality of the Works at all times.

Upon completion and submission of each portion of the Works to the Engineer for examination, the Contractor shall furnish the Engineer with the results of relevant tests, measurements and levels, thereby indicating compliance with the Specifications. The Engineer will not examine or inspect any portion of work submitted for approval unless the request for inspection and approval is accompanied by relevant tests, measurements and levels indicating compliance.

C3.1.13 Samples

Materials or work that do not conform to the approved samples, submitted in terms of Sub-Clause 23(4) of the Conditions of Contract, will be rejected. The Engineer reserves the right to submit samples for testing to ensure that the material represented by the

C3.1.14 Notices, Signs, Barricades and Advertisements

Notices, signs and barricades (required in terms of Clause 33 of the Conditions of Contract) as well as advertisements may only be erected where approved by the Engineer. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Engineer shall have the right to have any sign, notice or advertisement moved to another location, or to have it removed from the Site of the Works, should it in any way prove to be unsatisfactory, inconvenient or dangerous to the general public.

C3.1.15 REQUIREMENTS FOR ACCOMMODATION OF TRAFFIC

General

The Contractor will be responsible for the safe and easy passage of public traffic past and on sections of roads of which he has occupation or where work has to be done near traffic.

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.

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 Engineer 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 provide and grant access to persons whose properties fall within or adjoin the area in which he is working.

C3.1.16 Open Trenches

Trenches may not be left open during the builder's holidays, and shall be safeguarded at all times from danger to the public. Safe trench-crossings shall be provided at all intersections with accesses to properties and with public roads and paths. The length of trench left open at any one time may be restricted by the Engineer, should he consider such restriction to be in the interest of public safety.

C3.1.17 Statutory Regulations

The statutory requirement of the Occupational Health and Safety Act, Act 85 of 1993 (referred to as the Act below), and all regulations promulgated there under as well as the other relevant acts must be adhered to by the Contractor, with specific reference to the safety of all employees and the public, irrespective of whether such employees are employed by the Contractor or by his subcontractors (including local subcontractors). The Contractor, in entering into this Contract, hereby agrees with the Employer in terms of Section 37(2) of the Act, that the Contractor as an employer in its own right and in its capacity as Contractor for the execution of the Works, shall have certain obligations and that the following arrangement shall apply between the Contractor and the Employer to ensure compliance by the Contractor with the provisions of

the Act, namely:-

- (a) The Contractor undertakes to acquaint the appropriate officials and the employees of the Contractor with all relevant provisions of the Act, and the regulations promulgated in terms of the Act;
- (b) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and regulations will be fully complied with; and
- (c) The Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and regulations, and expressly absolves the Employer and the Engineer from being obliged to comply with any of the aforesaid duties, obligations and prohibitions in respect of the Works; and
- (d) The Contractor shall be obliged to report forthwith to the Employer and the Engineer any investigation, complaint, or criminal charge which may arise as a consequence of the provisions of the Act and regulations pursuant to work performed on behalf of the Employer, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.
- (e) The Contractor shall sign the agreement bound into Section C1.2 of this document.

The Contractor shall comply with all the conditions of the Record of Decision in terms of Section 22(3) of the Environmental Conservation Act, 1989. A copy of the Record of Decision and/or the Environmental Management Plan is bound into Section C3.5.1 of this Contract Document.

A time-related and a fixed-charge item have been provided in Schedule A of the Schedule of Quantities. The contractor shall allow for all obligations imposed by the Environmental Management Plan including the appointment of an environmental manager/control officer.

C3.1.18 Safety

"Pursuant to the provisions of the Conditions of Contract, and without in any way limiting the Contractor's obligations there under, the Contractor shall at his own expense (except only where specific provision (if any) is made in the contract for the reimbursement to the Contractor in respect of particular items), provide the following:

- (a) The Principal Contractor must do a Risk assessment and compile an OHS Plan to be evaluated and approved by the Safety Agent prior to commencement of Construction.
- (b) The Contractor must ensure that regular safety meetings be held, and that the minutes of such meetings be kept in a Safety File, which must be available on site at all, times.
- (c) Provide to its Employees on the site of the works, all safety materials, clothing and equipment necessary to ensure full compliance with the provisions of the Occupational health and Safety Act, 1993 (Act No 85 of 1993) as amended (hereinafter referred to as the Act) at all times, and shall institute appropriate and effective measures to ensure the proper usage of such safety materials, clothing and equipment at all times;
- (d) Provide, install and maintain all barricades, safety signage and other measures to ensure the safety of workmen and all persons in, on and around the site, as well as the general public;

- (e) Implement on the site of the works, such procedures and systems and keep all records as may be required to ensure compliance with the requirements of the Act at all times;
- (f) Implement all necessary measures so as to ensure compliance with the Act by all subcontractors engaged by the Contractor and their employees engaged on the works;
- (g) Full compliance with all other requirements pertaining to safety as may be specified in the Contract (Also refer to Notice to Tenderers).

The Employer and the Engineer shall be entitled, although not obliged, to make such inspections on the site as they shall deem appropriate, for the purpose of verifying the Contractor's compliance with the requirements of the Act.

For this purpose, the Contractor shall grant full access to the site of all parts of the site and shall co-operate fully in such inspections and shall make available for inspection all such documents and records as the Employer's and/or Engineer's representative may reasonably require.

Where any such investigations reveal, or where it comes to the Engineer's attention that the Contractor is in any way in breach of the requirements of the Act or is failing to comply with the provisions of this clause, the Engineer shall, in accordance with the provisions of clause 39 of the Conditions of Contract, be entitled to suspend progress on the works or any part thereof until such time as the Contractor has demonstrated to the satisfaction of the Engineer, that such breach has been rectified.

The Contractor shall have no grounds for a claim against the Employer for extension of time and/or additional costs if the progress on the works or any part thereof is suspended by the Engineer in terms of this clause, and the Contractor shall remain fully liable in respect of the payment of penalties for late completion in accordance with the provisions of clause 43(1) of the Conditions of Contract should the Contractor fail to complete the Works on or before the specified due completion date in consequence of the suspension.

Persistent and repeated breach by the Contractor of the requirements of the Act and/or this clause shall constitute grounds for the Engineer to act in terms of sub-clause 55(1)(b)(vi) of the Conditions of Contract and for the Employer to cancel the Contract in accordance with the further provisions of the said clause 55."

In addition to all above safety related requirements the Contractor shall take cognisance of the requirements of the construction regulations and OHS Specifications bound in C3.5.2 of this document.

C3.1.19 Safety Officer

OHS must be provided.

The Contractor is required to ensure compliance with the Occupational Health and Safety Act (Act 85 of 1993) and its regulations, in particular the Construction Regulations, 2003, to appoint a Health and Safety Officer for the works.

The safety officer shall have a sound knowledge of the Occupational health and Safety Act. He shall preferably have completed the Safety Management Training Course (SAMTRAC) presented by NOSA. The Contractor shall submit details of the proposed.

C3.1.20 Source of Material

The contractor will be held responsible for locating sources of all materials complying with the relevant minimum requirements to be used in this contract. No separate payment shall be made for this, as all costs related thereto shall be deemed to be covered by the tendered rates.

Where possible materials manufactured or produced locally shall be procured to promote local enterprise.

A designated borrow pit shall be available for sourcing of the selected layers and sub-base material required for the project. The contractor shall only use material from this designated borrow pit and specific location of further excavation within the borrow pit shall be indicated by the engineer.

C3.1.21 Photographic Record

Prior to the commencement of the work, and during the contract period, a photographic record shall be made of all existing stands and structures to be effected by the road construction, and forwarded to the Engineer prior to the authorisation of the first progress payment.

A payment item is included in the Schedule of Quantities to cover the Contractor's cost for compliance with the above requirements.

C3.2 ENGINEERING

C3.2.1 Design

- The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.
- The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works
- The Contractor shall supply all details necessary to assist the Engineer in the compilation of the as – built drawings

C3.2.2 Employer's Design

The Employer has designed the permanent works included in this contract. The detail of the works is indicated on the drawings and in the specifications. The Tenderer may submit alternative offers for designs prepared by himself subject to the conditions specified in clause 05 of the Standard Specifications.

C3.2.3 Drawings

The Contractor shall use only the dimensions stated in figures on the Drawings in setting out the Works, and dimensions shall not be scaled from the Drawings, unless required by the Engineer. The Engineer will, on the request of the Contractor in accordance with the provisions of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The position of pipe bends, junction boxes, duct ends and all other underground infrastructure shall be given by either co-ordinates or stake value and offset. Where necessary, levels shall also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Engineer's Representative on a regular basis.

All information in possession of the Contractor, required by the Engineer and/or the Engineer's Representative to complete the as-built/record drawings, must be submitted to the Engineer's Representative before a Certificate of Completion will be issued.

C2.3.1.1 Additional construction drawings will, in terms of Clause 5.9.2 of the General Conditions of Contract (2010), be issued to the Contractor by the Engineer/Employer on the commencement date and from time to time as required."

C3.3 PROCUREMENT

C3.3.1 Procurement Policy

Tenders will be evaluated in terms of the Municipalities Supply Chain Management Policy, as adopted by the Municipality. Copies of the policy are obtainable from the offices of the Municipality.

C3.3.2 Restriction of the Utilisation of Personnel in the Permanent Employment of the Contractor

The Contractor shall limit the utilization of his permanently employed personnel to that of key personnel only on the Works, as defined below, and shall execute and complete the Works utilizing a temporary workforce employed directly by the Contractor and/or by his sub-contractors, using the assistance of the labour desk that will be established for the project in consultation with the various communities that are established in proximity to the Works or which will be allocated within the development.

Without derogating from the Contractor's obligations to complete the Works within the specified time for completion in terms of GCC 2010, the numbers in each category of the Contractor's key personnel, as stated by the Contractor in Section T2 of this document, will be strictly controlled during the contract period and any increase in numbers will be subject to the prior approval of the Employer.

"Key personnel" means all contracts managers, site agents, site clerks, materials and survey technicians, QNTY surveyors, trainers, supervisors, foremen, skilled plant operators, welders, shutter hands and the like, and all other personnel in the permanent employ of the Contractor or his sub-contractors who possess special skills, and/or who play key roles within the Contractor's or his subcontractor's operations.

The Engineer may at his discretion, upon receipt of a written and fully motivated application from the Contractor, and where he deems the circumstances so warrant, authorise in writing that the Contractor may utilise in the execution of the Works, workers not being his key personnel but who are in his permanent employ.

Without limiting the generality of application of this sub-clause, circumstances which may be considered by the Engineer to warrant authorisation of the use of the Contractor's permanent employees other than key personnel, include:

- (a) The unavailability from local sources of sufficient numbers of temporary workers and/or sub-contractors to execute the Works provided always that the Contractor has satisfied the Engineer that he has exercised his best endeavors and taken all reasonable actions to recruit sufficient temporary workers and sub-contractors from local sources as contemplated above.
- (b) The unavailability within the temporary worker pool and/or from subcontractor sources available to the Contractor in terms of the Contract, of sufficient skills necessary to execute the Works or specific portions thereof, in situations where the completion period allowed in the Contract is insufficient to facilitate the creation of the necessary skills through the provision of suitable training as contemplated in the Contract;
- (c) Any other circumstances which the Engineer may deem as constituting a warrant.

C3.3.3 Provision of Temporary Workforce for the Contract

The Contractor shall employ labour from the local community through the CLO except for approved key staff in the permanent employ of the Contractor, to the maximum extent that is compatible with the requirements of clause 21 of the Conditions of Contract.

Although the Contractor shall adhere to the statutory minimum wage rates, he is however at liberty to negotiate additional incentive payments based on performance.

The Occupational Health and Safety Act must be adhered to with reference to the safety of any employee employed by the Contractor.

The successful tenderer shall liaise with the Ward Councillor/Ward Committee whereby the Ward Councillor shall provide to the Contractor the following if necessary:

- a) A Community Liaison Officer (CLO) for liaison with the recipient community for labour recruitment.
- The CLO shall attend all site and other meetings concerning the project.
 - Only one CLO shall be appointed per project. If the project spans over more than one Ward, the relevant Ward Councillors shall agree on one CLO to be appointed by the Contractor. Should no agreement be found as envisaged, the relevant Project Manager together with the Engineer, will interview prospective appointees and in their discretion appoint such CLO.
 - Notwithstanding the above, if the vastness of the project requires the use of more than one CLO, this will be permitted provided that the total monthly sum paid to all CLO's shall not exceed the amount allowed for in paragraph bill of quantities.
 - Should the Contractor experience any difficulties with the community, these difficulties shall immediately be brought to the attention of the Municipality/Project Manager who shall arrange a meeting with the relevant Ward Councillor(s) and the CLO to resolve such difficulties.
- The main Contractor shall ensure that any Sub-Contractor he may appoint shall adhere to these conditions but also subject to the provisos applicable to the duration of such sub-contract.
- Should any of the above conditions be less favorable than any Bargaining Council Agreement or Act applicable to the Contractor, the more favorable condition will apply.
- A contract of employment or subcontract should be signed between the Contractor and each of his employees or sub-contractors, as the case may be. Likewise contracts of employment must be entered into between each such sub-contractor, and each of the specific subcontractor's employees. Employment and subcontract agreements shall make clear reference to at least the following conditions.
- The minimum agreed wage rate per hour in respect of labourers;
 - The agreed pay rate per unit of production where applicable;
 - UIF and WCA payments;
 - Minimum working hours per day;
 - Start and end times of a daily shift;
 - Lunch break times;
 - Company policy regarding:
 - Rain time
 - Sickness and absenteeism
 - Disciplinary matters
 - Grievances
 - Method and frequency of payment;
 - Work clothes and safety equipment to be issued
 - Labour Desk

C3.4 CONSTRUCTION

C3.4.1 Standard Specifications

C3.4.1.1 The Standard specification, are carried out strictly in accordance with SABS 1200 - "Standard Specification for Civil Engineering Construction" as approved by the Council of the South African Bureau of Standards.

C3.4.1.2 For the purpose of this Contract the latest issues of the following Standard Specifications for Civil Engineering Construction, applicable at the date of tender advertisement, shall apply-

SABS 1200

- A - GENERAL
- AB - ENGINEER'S OFFICE
- C - SITE CLEARANCE
- D - EARTHWORKS
- DA - EARTHWORKS (SMALL WORKS)
- DB - EARTHWORKS (PIPE TRENCHES)
- DM - EARTHWORKS (ROADS, SUBGRADE)
- G - CONCRETE (STRUCTURAL)
- GE - PRECAST CONCRETE (STRUCTURAL
- HB - CLADDING AND SHEETING
- L - MEDIUM – PRESSURE PIPELINES
- LB - BEDDING (PIPES)
- LD - SEWERS
- LE - STORMWATER DRAINAGE
- ME - SUBBASE
- MF - BASE
- MH - ASPHALT BASEAND SURFACING

C3.4.1.3 The term "project specifications" appearing in any of the SABS 1200 standardised specifications must be replaced with the terms "scope of work".

C3.4.1.4 References from, and variations and additions to the Standard Specifications and Particular Specifications are included in section **C3.4.2**.

C3.4.2 Variations and Additions to Standard and Particular Specifications

The following variations and additions to the Standard and Particular Specifications will be applicable to this Contract.

The various documents listed in section C3.4.1 shall be treated as mutually explanatory. However, should any requirement of section C3.4.2 conflict with any

requirement of the Standardised Specifications or with any requirement of the Particular Specifications, then the requirement of section C3.4.2 shall prevail.

C3.4.3 EPWP labour intensive specification

C3.4.3.1 Labour intensive competencies of supervisory and management staff

Contractors having a CIDB contractor grading designation of 5CE and higher shall only engage supervisory and management staff in labour intensive works who have either completed, or for the period 1 April 2004 to 30 June 2006, are registered for training towards, the skills programme outlined in Table 1.

The managing principal of the contractor, namely, a sole proprietor, the senior partner, the managing director or managing member of a close corporation, as relevant, having a contractor grading designation of 1CE, 2CE, 3CE PE and 4CE shall have personally completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme for the NQF level 2. All other site supervisory staff in the employ of such contractors must have completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme for, the NQF level 2 unit standards or NQF level 4 unit standards.

Table 1: Skills programme for supervisory and management staff

Personnel	NQF level	Unit standard titles	Skills programme description
Team leader / supervisor	2	Apply Labour Intensive Construction Systems and Techniques to Work Activities	This unit standard must be completed, and
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
Foreman/ supervisor	4	Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	Any one of these 3 unit standards
		Implement labour Intensive Construction Systems and Techniques	
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	
Site Agent / Manager (i.e. the contractor's most senior representative that is resident on the site)	5	Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	This unit standard must be completed, and
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
		Manage Labour Intensive Construction Processes	

C3.4.3.2 Employment of unskilled and semi-skilled workers in labour-intensive works

C3.4.3.2.1 Requirements for the sourcing and engagement of labour.

1. Unskilled and semi-skilled labour required for the execution of all labour intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.
2. The rate of pay set for the EPWP is **R 170** per day/task as set by Dr Nkosazana Dlamini Zuma Local municipality.
3. Tasks established by the contractor must be such that:
 - a) the average worker completes 5 tasks per week in 40 hours or less; and,
 - b) The weakest worker completes 5 tasks per week in 55 hours or less.
4. The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of C3.4.3.2.1.3.
5. The Contractor shall, through all available community structures, inform the local community of the labour intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households:
 - a) Where the head of the household has less than a primary school education;
 - b) That has less than one full time person earning an income;
 - c) Where subsistence agriculture is the source of income.
 - d) Those that are not in receipt of any social security pension income

6. The Contractor shall Endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:
 - a) 60 % women;
 - b) 20% youth who are between the ages of 18 and 25; and
 - c) 2% on persons with disabilities.

C3.4.3.3 Specific provisions pertaining to SANS 1914-5

1. Definitions

Targeted labour: Unemployed persons who are employed as local labour on the project.

2. Contract participation goals

- Is no specified contract participation goal for the contract. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.
- The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

C3.4.3.4 Terms and conditions for the engagement of targeted labour

Further to the provisions of clause 3.3.2 of SANS 1914-5, written contracts shall be entered into with targeted labour.

C3.4.3.5 Variations to SANS 1914-5

1. The definition for net amount shall be amended as follows:
Financial value of the contract upon completion, exclusive of any value added tax or sales tax, which the law requires the employer to pay the contractor.
2. The schedule referred to in 5.2 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of days of formal training provided to targeted labour.

C3.4.3.6 Training of targeted labour

1. The contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.
3. The cost of the formal training of targeted labour will be funded by the provincial office of the Department of Labour. This training should take place as close to the project site as practically possible. The contractor must access this training by informing the relevant provincial office of the Department of Labour in writing, within 14 days of being awarded the contract, of the likely number of persons that will undergo training and when such training is required. The employer must be furnished with a copy of this request.

3. A copy of this training request made by the contractor to the DOL provincial office must also be faxed to the EPWP Training Director in the Department of Public Works– Cinderella Makunike, Fax Number 012 328 6820 or email cinderella.makunike@dpw.gov.za Tel: 083 677 4026.
4. The contractor shall be responsible for scheduling the training of workers and shall take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he she is employed for 4 months or more.
5. The contractor shall do nothing to dissuade targeted labour from participating in training programmes.
6. An allowance equal to 100% of the task rate or daily rate shall be paid by the contractor to workers who attend formal training, in terms of C3.4.3.6.2above.
7. Proof of compliance with the requirements of items above must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

C3.5 MANAGEMENT

C3.5.1 Applicable SANS and SABS standards

- a) The following SANS 1921 Construction Works standards and associated specification data are applicable:
- i) SANS 1921-1, General
 - ii) SANS 1921-2, Accommodation of traffic on public roads occupied by the contractor
 - iii) SANS 1921-4, Third party management support
 - iv) SANS 1921-5, Earthworks activities which are to be performed by hand
 - v) SANS 1921 -6, HIV/AIDS Awareness

The abovementioned South African National Standards make several references to the Specification Data for data, provisions and variations that make these standards applicable to this contract. The Specification Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and these standards.

Each item of Specification Data given below is cross-referenced to the clause in the standard to which it mainly applies.

The associated Specification Data is as follows:

SANS 1921-1, Construction and management requirements for works contracts – Part 1: General engineering and construction works	
Clause	Specification data
Essential data	
4.1.7	There are no requirements for drawings, information and calculations for which the contractor is responsible
4.3.1	Refer to scope of works
4.7.3	No over break allowances for blasting is provided for
4.14.3	Refer to scope of works
4.14.5	The Contractor is required to provide latrine and ablution facilities

SANS 1921-5, Construction and management requirements for works contracts – Part 5: Earthworks activities which are to be performed by hand	
Clause	Specification Data
5.1	Essential Data: The depth of trenches which are to be excavated by hand is 1,5 metre
SANS 1921-6, Construction and management requirements for works contracts – Part 6: HIV/AIDS awareness	
4.2.1(a)	A qualified service provider is one that is accredited or a provisionally accredited training service provider in the HIV/AIDS field. A list of accredited service providers can be obtained from the Construction SETA (CETA) (tel. 011-265 5900), Health and Welfare SETA (HWSETA) (011-622 6852) or on the Health and Welfare SETA website: www.hwseta.org.za
Additional clauses	
The duration of each workshop is not to be less than 2 ½ hours.	

C3.5.2 Planning and Programming

The time for completion will be 5 months, which includes the allowance for inclement weather, (See Clause 45 of the Special Conditions of Contract). All statutory holidays for the Civil Engineering Industry falling within the authorised contract period, will be allowed as extensions to this period, but the Contractor will not be paid additional Time-Related charges for these days (Ref. PSA 8.4.1).

The Contractor shall submit to the Engineer within 7 days of the Commencement Date, a detailed programme setting out clearly the sequence of work, and the resources, which he intends to use.

C3.5.3 Environment

a) Sand and dust control

The Contractor shall, for the duration of the contract, take appropriate measures to control the dust and soil movement, which may arise due to his operations.

b) Precautions against Nuisance

Operations are being conducted in an urban area and in the presence of passing traffic. Precautions shall be taken to protect the public and to prevent unnecessary noise, dust or other nuisance.

Any rock or debris falling from trucks on the roads in use by the public shall be removed immediately. Precautions shall be taken to prevent fouling of public roads and completed construction by trucks transporting muddy material. The Engineer may order the Contractor to broom off and clean roads continuously where the mud tracking of vehicles or falling debris may constitute a danger to the travelling public.

c) Silencing Of Plant

Plant used on the Works shall be efficiently silenced and comply with the Noise Control By-Laws as appeared in the Administrator's Notice No. 1784 of 29 November 1978. Noise operations will be permitted only between the hours of 7:00 am and 5:00 p.m. Any work outside normal hours will be permitted only on the written authority of the Engineer, laid down in Clause 26 of the General Conditions of Contract.

C3.5.4 Accommodation of Traffic on Public Roads Occupied By the Contractor

The works involves the construction of new roadways and stormwater within an established residential community. The works will be undertaken in such a manner to provide access to residential property accesses and special attention must be drawn to the accommodation/deviation of traffic on the affected area of the works.

The need to accommodate the traffic safely and with the least amount of inconvenience to the travelling public is necessary throughout the construction period. 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.

Failure to maintain road signs, warning signs or flicker lights, etc, in a good condition shall constitute ample reason for the Engineer to stop the execution of the works until the road signs, etc, have been repaired to his satisfaction. The Contractor may not commence constructional activities before adequate provision has been made to accommodate traffic in accordance with the specifications.

C3.5.5 Testing, Completion, Commissioning, And Correction of Defects

Materials of work that do not conform to the approved samples submitted in terms of the General Conditions of Contract will be rejected. The Engineer reserves the right to submit samples to tests, to ensure that the material represented by the samples meet the specification requirements.

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the specifications and drawings rests with the Contractor, and the Contractor shall at his own expense, institute a quality control system and provide experienced engineers, foremen, surveyors, material technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.

The costs of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates tendered for the related items of work.

The Contractors attention is drawn to the provisions of the various Specifications regarding the minimum frequency of testing required. The Contractor shall at his own discretion increase this frequency where necessary to ensure adequate control. On completion and submission of every part of the work to the Engineer for examination, the Contractor shall furnish the Engineer with the results of the relevant tests to indicate compliance with the specifications.

C3.5.6 Recording Of Weather

Daily temperature and rainfall data shall be recorded in the site diary, and a copy shall be provided to the engineer's representative on a weekly basis. A rainfall gauge shall be located at the contractor's site camp. Temperature readings shall be taken at commencement and closure of the site on a daily basis. Additional readings will be required during construction of layer works, concrete works and surfacing.

C3.5.7 Format of Communications

Communication throughout the contract will be undertaken via written communication either by fax, site instruction or post. Email communication will only be considered as proof of communication when followed up by a written communication on the letterheads of the author or via a site instruction.

Request for inspection of the works will be accepted telephonically, however this request must be recorded in the site diary and site instruction book.

C3.5.8 Key Personnel

A schedule of key personnel to be employed with curriculum vitae of relevant experience shall be provided to the employers' representative prior to site handover.

C3.5.9 Management Meeting

The Engineer will conduct site meetings, prepare and circulate minutes, as determined by him at the beginning of the contract. The Contractor shall attend these meetings and shall ensure that when necessary, the required sub-contractor is represented. The approved minutes shall become part of the contract documents.

The Contractor shall be required to conduct safety meetings at intervals agreed to between the Employer or his Safety Agent and the Contractor as specified in the Health and Safety Specification bound in this document.

C3.5.10 Payment Certificates

The contractor shall submit to the engineer after the end of each month a statement in the required format, showing the estimated amount due to him, calculated in accordance with the General Conditions of Contract. The statement to be submitted by the contractor shall consist of 2 copies of the schedule of quantities.

C3.5.11 Protection of the Public

The Contractor shall at all times ensure that his operations do not endanger any member of the public.

As the area is adjacent to a residential area the Contractor shall take special precautions to prevent public access to any danger areas on the Works, e.g. by temporary barricades and/or fencing.

C3.5.12 Aids Awareness

A PROVISIONAL ALLOWANCE has been provided in the bill of quantities under training to undertake an aids awareness programme in the community.

C3.5.13 Site Visitors Book

A Site Visitors Book must be kept on site. All visitors visiting to the site must report to the site office and sign in the Site Visitors book before entering the construction site. The Agent and/or the Safety Officer must always accompany the Visitor. The Visitor must wear a hard hat, safety shoes and safety clothing when required.

C3.5.14 Information In Respect Of Plant

Information relating to plant on Site shall be recorded in the Daily Site Diary. In addition, the Contractor shall deliver to the Engineer, on a monthly basis, a detailed summary of construction plant kept on the Site, full particulars given for each day of the month. Distinction shall be made between plant in working order and plant out-of-order. Such inventory shall be submitted by the first day of the month following the month to be reported.

C3.5.15 Information In Respect Of Employees

Information relating to labour and management on Site shall be recorded in the Daily Site Diary, in addition, the Contractor shall deliver to the Engineer, on a monthly basis, a detailed summary of supervisory staff, labour employed (own and local labour) by category, and sub-contractors (both local and imported) for each day of the month. Such return shall be submitted by the first day of the month following the month to be reported.

3.6 VARIATIONS AND ADDITIONS TO STANDARD SPECIFICATIONS

SABS 1200 A: GENERAL

PSA 1 QUALITY OF MATERIALS (Sub clause 3.1)

Add the following:

All materials used in this Contract shall be the official SABS mark where applicable.

All materials shall be new and of the best quality available unless otherwise specified.

PSA 2 CONTRACTOR'S OFFICES, STORES AND SERVICES (Clause 4.2)

Add the following to the provisions of Clause 4.2.

- a) The location of the Contractor's offices, stores and services on site shall be subject to approval by the Engineer.
- b) The Contractor's office is to include a facility with furniture suitable for the use during site meetings, accommodating 8 persons.
- c) The Contractor's designated site agent shall be in possession of a cellular telephone.

No additional payment is made for this service and shall be deemed to be included in the preliminary and general.

PSA 3 SETTING OUT OF THE WORKS (Clause 5.1.1)

Substitute the first sentence of Clause 5.1.1 with the following. The engineer will provide information for setting out of the works.

Add the following:

Setting out the Works will not be measured and paid for directly, and compensation for the works involved in setting out shall be deemed to be covered by the rates and prices tendered and paid for in the various items of works included under this Contract.

PSA 4 WATCHING, BARRICADING, LIGHTING AND TRAFFIC CROSSINGS (Clause 5.2)

The Contractor shall make adequate provision for the supply of temporary warning signs, barriers drums etc to the satisfaction of the Engineer for the entire duration of the contract. Road and traffic signs shall comply with the requirements of the "South African Road Traffic Manual".

PSA 5 LOCATION AND PROTECTION OF EXISTING SERVICES (Clause 5.4)

Add the following provisions of Clause 5.4.1

PSA 5.1 Location of existing services

Before underground or excavation work is carried out, the Contractor shall ascertain the presence and position of all services likely to be damaged or interfered with by his activities. He shall obtain up-to-date plans from the Engineer for this purpose, showing the position of services in the area where he intends to work.

As services can often not be reliably located from such plans, the Contractor shall determine the exact position of such services by means of suitable detecting equipment and afterwards by careful hand excavation where necessary in order to expose the services at the positions of possible interference by his activities. This procedure shall also be followed in respect of services not shown on the plans but believed to be present.

All such services, the positions of which have been located at the critical points, shall be designates as "known" services and their positions shall be indicated on a separate set of Drawings, a copy of which shall be furnished to the Engineer.

While he is occupying the Site, the Contractor shall be liable for all damage caused by him to known services as well as for consequential damage, whether caused directly by his operations or by the lack of proper protection.

PSA 6 ACCOMMODATION OF TRAFFIC (New clause 5.9)

Temporary traffic signs shall be erected at all diversions.

The number and layout of the traffic signs shall comply with the Site Manual entitled "Safety at Roadwork's in Urban Areas", as published by the Department of Transport.

Traffic signs shall have a yellow background with either a red / black border.

PSA 7 TOLERANCES

PSA 7.1 General (New sub-clause 6.4)

No guarantee is given that the full specified tolerance will be available independently of each other, and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified or then clearly not applicable all quantities for measurement and payment shall be determined from the "authorised" dimensions. These are specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Engineers, without any allowances for the specified tolerances.

Except if otherwise specified, all measurements for determining quantities for payment will be based on the "authorised" dimensions.

If the work is therefore constructed in accordance with the "authorised" dimensions plus or minus the tolerances allowed, quantities will be based on the "authorised dimensions regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the "authorised" dimensions plus or minus the tolerances allowed, the Engineers may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the "authorised" dimensions, and where the actual dimensions are less than the "authorised" dimensions minus the tolerance allowed quantities for payment shall be based on the actual dimensions as constructed.

PSA 9 MEASUREMENT AND PAYMENT

PSA 9.1 Contractual Requirements (sub clause 8.3.1)

Add to sub-clause 8.3.1:

"In addition, the sum tendered shall cover all initial costs incurred in complying with the requirements of the Special Conditions of Contract.

PSA 9.2 Contractual Requirements (sub clause 8.4.1)

The Contractor shall tender a lump sum in the Schedule of Quantities to cover his time-related establishment costs. The amount tendered and paid shall be full compensation to the Contractor for:

- (i) The maintenance of his whole organisation as established for this Contract.
- (ii) The maintenance of all insurances, indemnities and guarantees required in terms of the Conditions of Contract or Tender where applicable.
- (iii) Compliance with all general conditions and requirements, which are not specifically, measured elsewhere for payment in these Contract Documents.

The Contractor shall tender a lump sum for the abovementioned items.

Payment of the lump sum shall be made monthly in compliance with the method laid down in Sub-clause 8.2.2 of SABS 1200:A.

The Contractor will not be paid Time-Related Preliminary and General charges for any Special Non-Working Days, as stipulated in the Appendix, which shall be deemed to have been allowed for in his rates.

PSA 9.3 Adjusted Payment for Time-Related Items

The payment to the Contractor for Time-Related Items shall be adjusted in accordance with the following formula in the event of the Contract being extended by means of a variation order:

Sum of Tendered amounts for Time Related Items x Extension of Time authorised by variation order

Tender contract period

*For the purposes of applying this formula "Extension of Time" will exclude the Contractor's December/January closedown period, if applicable.

The abovementioned adjustment of the payment for Time-Related Items shall be made in the Completion Payment Certificate and shall be the only payment for additional Time-Related costs irrespective of the actual period required to complete the Contract including its authorised extensions.

In the case of fixed price contracts, the amount by which the Time-Related Items is adjusted shall not be subject to the Contract Price Adjustment formula.

In the case of contracts subject to Contract Price Adjustment the amount by which the time-related items are adjusted shall be subject to the Contract Price Adjustment formula.

PSA 9.4 Compliance with OHS Act and Regulations

(Including The Construction Regulations 2003)

unit: sum

The tendered sum shall include full compensation to the Contractor for compliance with all the requirements of the OHS Act and Regulations (including the Construction Regulations 2003) at all times for the full duration of the Contract.

This sum will be paid to the contractor in equal monthly amounts subject to proper/substantial compliance

PSA 9.5 Accommodation of Traffic (Clause 8.8.2)

Where the new works interferes with the existing roads, the Contractor shall construct these sections of the works under traffic. The work will involve catering for the safe and easy passage of public traffic in all weather, both day and night for the full traffic control and signposting.

The Contractor may alternatively make his own arrangement for detours to be constructed, all subject to the Engineers approval.

Add the following after the first paragraph:

"All temporary road signs, devices, sequences, layouts and spacing shall comply with the requirements of the Road Traffic Act, 1996 (Act 93 of 1996), the National Road Traffic Regulations, 2000, the South African Road Traffic Signs Manual and the requirements of the relevant road authority. All temporary traffic control facilities shall also comply with the guidelines set in SA Road Traffic Signs Manual, Volume 2, Chapter 13: Road works Signing, (SARTSM, June 1999, obtainable from the Government Printer, Pretoria)"

SABS 1200 AB: ENGINEER'S OFFICE

PSAB 1 TEMPORARY/ PERMANENT OFFICES

The Contractor is to provide a temporary office for use by the Engineer. The offices should be able to accommodate one full time Engineer's Representative and two assistants. The offices should be of make by M projects or similar equivalent with the following minimum specification.

- Exterior should be of chromadek make with a chromadek roof. Windows should be aluminium an doors to be chromadek
- Interior should include oak ply cladding with vinyl flooring. Ceiling is to be with vinyl.
- Air conditioning is to be provided

The Engineer's offices are to be equipped with the following as a minimum:

- Three desks each with lockable drawers
- Three high back swivel chairs
- Three visitors chairs
- A facility to store/hang drawers

The contractor should also make arrangements for covered facilities to enable the accommodation of approximately 12 – 16 people during progress site meetings, to be held fortnightly or monthly.

The facilities are to be provided, to the satisfaction of the Engineer, within 14 days or commencement date. **The Engineer may withhold certification of the first progress payment until these facilities are provided.**

PSAB 2 NAMEBOARDS (Clause 3.1)

Substitute the first paragraph of Clause 3.1 with the following:

The Contractor must supply and erect one name board at an approved site, and shall comply as regards site, painting and details of the municipalities standard name board.

PSAB 3 SURVEY ASSISTANTS (Clause 5.5)

Substitute "two or more suitable educated survey labourers" in this paragraph with "one semi-skilled labourer".

The Engineer's Representative will occasionally need the assistance of a survey labourer to help with testing, survey, etc., envisaged at approximately 4 hours (non-consecutive) per week.

PSAB 4 SURVEY EQUIPMENT

The Contractor shall provide the following tested and approved survey equipment on site for the duration of the contract and for the use of the Engineer whenever needed.

- a) One automatic level plus tripod,
- b) One level staff, all graduated metrically and
- c) One 5m and one 25m-tape measure.

The above-mentioned equipment may, by arrangement be shared between the Contractor and the Engineer's Representative. The Contractor shall keep the equipment insured against any loss; damage or breakage and he shall indemnify the Engineer and the Employer against any claims in this regard.

PSAB 5 MEASUREMENT AND PAYMENT

PSAB 5.1 Survey Assistant ((New Clause)

Payment for the survey assistant shall be at the tendered day work rates for the hours worked in assisting the Engineer's Representative. No payment shall be made for the survey equipment all costs shall be deemed to be covered by the rates tendered for the Contractor's facilities. No payment shall be made for the survey equipment or survey assistant and all costs shall be deemed to be covered by the rates tendered for the Contractor's facilities.

SABS 1200 C: SITE CLEARANCE

PSC 1 SCOPE (Clause 1.1)

Add the following:

"The specification also covers the removal of unreinforced and reinforced concrete, existing pipe culverts and existing roadway and layerworks, (at tie-ins and road widening), and saw cutting of existing road surfacing."

PSC 2 MATERIALS

Disposal of Material (Sub-clause 3.1)

Delete the first two sentences of this clause and replace with:

"Debris arising from clearing operations or from the demolition of existing structures that are not suitable for re-use in the works or for landscaping in areas designated by the Engineer, shall be removed by the Contractor and disposed of at the approved tip site. Transport of such material shall not be paid separately, but shall be included in the relevant items for clearing

The rates tendered shall allow for any fees to be paid at the tip site."

PSC 3 MEASUREMENT AND PAYMENT

PSC 3.1 Clear And Grub (sub - clause 8.2.1)

The location of disposal or dumping sites shall be the Contractor's responsibility and no overhaul shall be payable to the Contractor for loading, temporary and dumping of material thus cleared under this scheduled item.

Unit of measurement for "clear and grub", for road works shall be the square metre, and clearing for sewer and storm-water routes shall be metre.

PSC 3.2 Cleaning of Existing Stormwater Manholes/ Catchpits (Items measured separately) unit: m³

The unit of measurement shall be the cubic meter of material removed from the individual units. The tendered rate shall include for all plant, labour, spoiling material and all other incidentals necessary to undertake the work.

PSC 3.3 Removal of Existing Roadway to Spoil (New Clause)

- a) Existing Asphalt unit: m³
- b) Existing Base and Sub-base unit: m³

The volume measured shall be the area marked for removal multiplied by the thickness of the layer removed to the instructions of the Engineer. The tendered rate shall cover the cost of breaking the surfacing and layer-works to a maximum depth of 400mm, loading, transporting and disposal. The cost of saw cutting a neat vertical joint around the perimeter of the removed section of surfacing would be paid for under item PSC3.6

SABS 1200 DA: EARTHWORKS (SMALL WORKS)

PSDA 1 CLASSIFICATION FOR EXCAVATION PURPOSES (Clause 3.1)

Delete Sub-Clause 3.1.1 and 3.1.2 and replace with the following:

PSDA 1.1 Method of Classifying

The Contractor may use any method he chooses to excavate any class of material but his chosen method of excavation shall not determine the classification of the excavation. The Engineer or his Representative will decide on the classification of materials. In the first instance classification will be based on inspection of the material to be excavated and on the criteria given in PSD 3.1.2(a) and (c).

PSDA 1.2 Classes of Excavation

All materials encountered in any excavation for any purpose including restricted excavation will be classified as follows:

(a) Soft Excavation

Any material, which can be removed by bulldozers or backhoes, shall be classified as soft excavation.

Soft excavation shall be material not falling into the category of hard rock excavation.

(c) Hard rock excavation

Hard rock excavation shall be excavation in material (including undecomposed boulders exceeding 0.17 cubic metre in individual volume) that cannot be efficiently removed without blasting, wedging and splitting, or hydraulic hammers.

This classification includes materials such as:

- Solid unfractured rock occurring in bulk
- Solid ledges thicker than 200mm
- Igneous rock intrusions
- Cemented sedimentary rocks.

PSDA2 CONSTRUCTION

PSDA2.1 Conservation of Topsoil (5.2.1.2)

Add the following to Sub-clause 5.2.1.2:

“Topsoil shall not be stockpiled higher than 2,0m. Care shall be exercised to prevent the compaction of topsoil in any way especially by vehicles travelling over such material.”

PSDA 3 MEASUREMENT AND PAYMENT

PSDA 3.1 Working of borrow pits (new item)

a) Removal of topsoil to stockpile unit: m³

The unit of measurement shall be the cubic metre of topsoil removed. The tendered rate must include for all plant, labour and all other incidentals necessary to undertake the work, including fees payable for dumping to a municipal refuse site.

b) Excess overburden unit: m³

The unit of measurement shall be the cubic metre of excess overturn measured in place after topsoil stripping

c) Finishing of borrow area in

- i) Hard rock material unit: m²
- ii) Soft material unit: m²

The unit of measurement for finishing of borrow area shall be the square metre measure in accordance with the finally excavated area of the borrow pit, before it is finished off

The tendered rate shall include full compensation for finishing off the borrow pits as specified in 5.2.2.2

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C3.6: PROJECT SPECIFICATIONS

SCOPE OF WORKS

SABS 1200 DB: EARTHWORKS (PIPE TRENCHES)

PSDB 1 CLASSES OF EXCAVATION (Clause 3.1)

The excavation of material, for the purposes of measurement and payment shall be classified as specified in PSDA 1.

SABS 1200 DM: EARTHWORKS (ROADS, SUBGRADE)

PSDM 1 DEFINITIONS AND ABBREVIATIONS (Clause 2.3)

Add the following:

"The Contractor's attention is drawn to the definitions of formation level as defined in SABS 1200 M."

PSDM 2 CLASSIFICATION OF EXCAVATION (Clause 3.1)

Clause PSDA 1 will apply for this clause.

PSDM 3 FILL (Clause 3.2.2)

In addition to the requirements of Clause 3.2.2, the following shall apply:

The minimum CBR swell at 100% of modified AASHTO maximum density be as follows:

Depth Below Final Road Surface (mm)	Maximum CBR SWELL (%)
250 - 800	1,5
Over 800	4,0

Sand shall be as for Clause 3.2.2

PSDM 4 SUBGRADE

The minimum CBR of the sub grade layers at 93% modified AASHTO maximum density shall be 7

PSDM 5 CONSTRUCTION (Clause 5)

PSDM 5.1 Treatment of Road Bed (Sub Clause 5.2.2.3)

- (a) Preparation and Compaction of Road Bed

Add the following:

"Where road bed preparation takes place in sand the in-situ sand layer is to be watered and compacted to 100% Modified AASHTO density. The surface of the in-situ sand layer is to be firm and smooth in order to receive the subsequent S.S.G. or sub-base layer, as the case may be. To this end the Engineer may order that unnecessary construction traffic remain off the finished in-situ sand layer until the subsequent layer has been completed."

PSDM 6 USE OF MATERIALS (Sub Clause 5.2.2.3 & 8.3.4)

In addition to the requirements of Clause 5.2.2.3, the order of excavating cuts shall be arranged to minimize the double handling of material.

PSDM 7 TRIMMING, GRADING AND COMPACTING OF SIDEWALKS (New Clause)

After completion of the road layers, including the premix surface, and after construction of the necessary kerbs, including the satisfactory backfilling behind the kerb, the sidewalk shall be finished off to the lines and levels shown on the drawings or as directed.

Shortfall material shall be imported from the designated borrow pit and mixed with the existing, reshaped and compacted to levels as directed.

The Contractor shall be responsible for taking the necessary precautions and measures to control the dust nuisance, which may arise due to his operations on the sidewalk, whether from the natural ground surface or topsoil layer, until the Engineer accepts the verge.

PSDM 8 TRANSPORT

PSDM 8.1 Free haul (Clause 5.2.8.1)

Notwithstanding the provisions of Clause 5.2.8.1, all movements of cut and fill material shall be free haul.

PSDM 9 MEASUREMENT AND PAYMENT (Clause 8)

PSDM 9.1 (a) Cut to Fill, Borrow to Fill

Add to Sub-clause 8.3.4(1) the following:

“Where fill material is borrowed from trench excavations the rate shall include the selection from the sides of trenches, transporting, if necessary, stockpiling, preparing, processing, shaping (including forming side channels and benching if applicable), watering, mixing, compacting to the densities specified and finishing the slopes of fills.”

The fill material from commercial sources required for formation levels and undercuts shall be a minimum G7 quality material

PSDM 9.2 Surface Finishes

Add to Sub-clause 8.3.13 the following sub-clause (c):

“The major earthworks required to bring the verge to the required level and the additional depth of excavation or reduction in fill height as ordered for the topsoil operation shall be measured and paid for under item 8.3.4.

PSDM 9.3 Construct Selected Layers using Imported Material Compacted to 95% Modified AASHTO (New Clause)

The rate shall cover the cost of locating the source, complying with all the relevant precautions required in terms of Clause 5.1, SABS 1200 D, procuring the material, basic selection, transporting from source to point of deposition on the road, spreading, watering, compacting, final grading and complying with the tolerances and testing.

SABS 1200 GA: CONCRETE (SMALL WORKS)

PSGA 1 SCOPE (Clause 1.1)

This section includes specifications for various aspects of concrete referred to in other sections of the standard specifications.

PSGA 2 CEMENT (3.2.1 and 3.2.2)

The grade of concrete shall be as specified on the drawings or schedule of quantities. Cement shall not be kept in storage for longer than four weeks and shall be used in the order in which it has been stored.

SABS 1200 LB: BEDDING (PIPES)

PSLB 1 SCOPE (Clause 1.1)

This section includes bedding for stormwater pipes and culverts.

PSLB 2 BEDDING MATERIALS (Clause 3.4.1)

PSLB 2.1 Source of material

It is anticipated that selected fill material will be available from trench excavations.

PSLB 2.2 Selective excavation for bedding materials

Notwithstanding the requirements of Clause 3.7 of SABS 1200 DB and Clause 3.4.1 of SABS 1200 LB regarding the use of selective methods of excavation, selective method of excavation and plant shall be adopted by the Contractor as to enable him to avoid burring or contaminating material that is suitable and is required for bedding. The details contained in SABS 1200 LB shall be used for all relevant bedding details as applicable.

PSLB 3 CRUSHED STONE BEDDING (New clause)

Where the conditions on the trench bottom are so wet that the use of selected granular material is not practical, use will be made of 13.2 or 19mm single sized crushed stone material from commercial sources. The use of such stone will be entirely at the Engineer's discretion.

PSLB 4 FREE HAUL (Clause 8.1.6)

All material for bedding cradle and selected fill obtained from excavations on site shall be regarded as free haul. No overhaul will be payable for obtaining bedding material from within the site.

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY
CONTRACT No.: PWBS-B025/22/23
Construction of Creighton Sports Centre (phase 2)

C3.7: PARTICULAR SPECIFICATIONS

SCOPE OF WORKS

3.7 PARTICULAR SPECIFICATION

CONTENTS

HEALTH AND SAFETY SPECIFICATIONS

ENVIRONMENTAL MANAGEMENT PLAN

3.7.1: HEALTH AND SAFETY SPECIFICATION

<i>DOCUMENT INFORMATION</i>			
<i>Document Type</i>	<i>Originator</i>		
<i>Safety Plan</i>	<i>Occupational Health & Safety Officer</i>		
<i>Activity</i>	<i>Project Name</i>		
<i>HSE (Health, Safety and Environment)</i>			



**DR NKOSAZANA DLAMINI
 ZUMA MUNICIPALITY**

DOCUMENT CHANGE RECORD			
Rev	Date	Section (s) change (d)	Description of Revision



ANNEXURE A

PRE-CONSTRUCTION HEALTH AND SAFETY SPECIFICATION

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1. INTRODUCTION AND BACKGROUND

1.1 Background to the Pre-construction Health and Safety Specification

The Construction Regulations (July 2003) place the onus on the Client to prepare a pre-construction health & safety specification, highlighting all risks not successfully eliminated during design.

1.2 Purpose of the Pre-construction Health and Safety Specification

To assist in achieving compliance with the Occupational Health & Safety Act 85/1993 and the now promulgated Construction Regulations (July 2003) in order to reduce incidents and injuries. This pre-construction specification shall act as the basis for the drafting of the construction phase health & safety plan.

The pre-construction specification sets out the requirements to be followed by the Principal Contractor and other Contractors so that the health & safety of all persons potentially at risk may receive the same priority as other facets of the project e.g. cost, programme, environment, etc.

1.3 Implementation of the Pre-construction Health and Safety Specification

This specification forms an integral part of the contract, and the Contractor is required to use it at pre-tender phase when drawing up its project-specific construction phase health & safety plan. The Principal Contractor shall forward a copy of this specification to all Contractors at their bidding stage so that they can in turn prepare health & safety plans relating to their operations.

2. PRE-CONSTRUCTION HEALTH AND SAFETY SPECIFICATION

2.1 Scope

This Specification covers the requirements for eliminating and mitigating incidents and injuries on the particular project

The scope also addresses legal compliance, hazard identification and risk assessment, risk control, and promoting a health and safety culture amongst those working on the project. The specification also makes provision for the protection of those persons other than employees.

2.2 Interpretations

2.2.1 Application

This specification is a compliance document drawn up in terms of South African legislation and is therefore binding. It must be read in conjunction with relevant legislation as noted previously.

2.2.2 Definitions

The definitions as listed in the Occupational Health & Safety Act 85/1993 and Construction Regulations (July 2003) shall apply.

2.3 Minimum Administrative Requirements

2.3.1 Notification of Intention to Commence Construction Work

The Contractor shall notify the Provincial Director of the Department of Labour in writing before construction work commences. A copy of this notification must be forwarded to the Client on appointment.

2.3.2 Assignment of Contractor's Responsible Persons to Supervise Health and Safety on Site

The Contractor shall submit supervisory appointments as well as any relevant appointments in writing (as stipulated by the OHSA and Construction Regulations), prior to commencement of work. Proof of competency must be included. See annexure B.

2.3.3 Competency for Contractor's Appointed Competent Persons

Contractors' competent persons for the various risk management portfolios shall fulfil the criteria as stipulated under the definition of Competent in accordance with the Construction Regulations (July 2003). Proof of competence for the various appointments must be included.

2.3.4 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The Principal Contractor shall submit a letter of good standing with its Compensation Insurer to the Client as proof of registration. Contractors shall submit proof of registration to the Principal Contractor before they commence work on site.

2.3.5 Occupational Health and Safety Policy

The Principal Contractor and all Contractors shall submit a Health and Safety Policy signed by their Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented by the Company / Contractor.

2.3.6 Health and Safety Organogram

The Principal Contractor and all Contractors shall submit an organogram, outlining the Health and Safety Site Management Structure including the relevant appointments/competent persons. In cases where appointments have not been made, the organogram shall reflect the intended positions. The organogram shall be updated when there are any changes in the Site Management Structure.

2.3.7 Preliminary Hazard Identification and Risk Assessment and Progress Hazard Identification and Risk Assessment

The Contractor shall cause a hazard identification to be performed by a competent person before commencement of construction work, and the assessed risks shall form part of the construction phase health and safety plan submitted for approval by the Client. The risk assessment must include:

- a) A list of hazards identified as well as potentially hazardous tasks;
- b) A documented risk assessment based on the list of hazards and tasks;
- c) A set of safe working procedures (method statements) to eliminate, reduce and/or control the risks assessed;
- d) A monitoring and review procedure of the risks assessment as the risks change.

The Principal Contractor shall ensure that all Contractors are informed, instructed and trained by a competent person regarding any hazards, risks and related safe work procedures before any work commences and thereafter at regular intervals as the risks change and as new risks develop.

The Principal Contractor shall be responsible for ensuring that all persons who could be negatively affected by its operations are informed and trained according to the hazards and

risks and are conversant with the safe work procedures, control measures and other related rules (tool box talk strategy to be implemented).

2.3.8 Health and Safety Representative(s)

The Principal Contractor and all Contractors shall ensure that Health and Safety Representative(s) are appointed under consultation and trained to carry out their functions. The appointment must be in writing. The Health and Safety Representative shall carry out regular inspections, keep records and report all findings to the Responsible Person forthwith and at health & safety meetings.

2.3.9 Health and Safety Committees

The Principal Contractor shall ensure that project health and safety meetings are held monthly and minutes are kept on record. Meetings must be organised and chaired by the Principal Contractor's Responsible Person. All Contractors' Responsible Persons and Health & Safety Representatives shall attend the monthly health & safety meetings. Contractors shall also have their own internal health & safety committees in accordance with the OHS Act 85/1993 and minutes of their meetings shall be forwarded to the Principal Contractor on a monthly basis.

2.3.10 Health and Safety Training

2.3.10.1 Induction

The Principal Contractor shall ensure that all site personnel undergo a risk-specific health & safety induction training session before starting work. A record of attendance shall be kept in the health & safety file. **A suitable venue must be supplied to house this training.**

2.3.10.2 Awareness

The Principal Contractor shall ensure that, on site, periodic toolbox talks take place at least once per week. These talks should deal with risks relevant to the construction work at hand. A record of attendance shall be kept in the health & safety file. All Contractors have to comply with this minimum requirement.

2.3.10.3 Competency

All competent persons shall have the knowledge, experience, training, and qualifications specific to the work they have been appointed to supervise, control, carry out. This will have to be assessed on a regular basis e.g. periodic audits by the Client, progress meetings, etc. The Principal Contractor is responsible to ensure that competent Contractors are appointed to carry out construction work.

2.3.11 General Record Keeping

The Principal Contractor and all Contractors shall keep and maintain Health and Safety records to demonstrate compliance with this Specification, with the OHS Act 85/1993, and with the Construction Regulations (July 2003). The Principal Contractor shall ensure that all records of incidents/accidents, training, inspections, audits, etc. are kept in a health & safety file held in the site office. The Principal Contractor must ensure that every Contractor opens its own health & safety file, maintains the file and makes it available on request.

2.3.12 Health & Safety Audits, Monitoring and Reporting

The Client shall conduct monthly health & safety audits of the work operations including a full audit of physical site activities as well as an audit of the administration of health & safety. The Principal Contractor is obligated to conduct similar audits on all Contractors appointed by it. Detailed reports of the audit findings and results shall be reported on at all levels of project management meetings/forums. Copies of the Client audit reports shall be kept in the Primary Project Health & Safety File while the Principal Contractor audit reports shall be kept in their file, a copy being forwarded to the Client. Contractors have to audit their sub-contractors and keep records of these audits in their health & safety files, available on request.

2.3.13 Emergency Procedures

The Principal Contractor shall submit a detailed Emergency Procedure for approval by the Client prior to commencement on site. The procedure shall detail the response plan including the following key elements:

- List of key competent personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the specific types of emergencies;
- Information on hazardous material/situations.

Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, bomb threats, major incidents/accidents, etc. The Principal Contractor shall advise the Client in writing forthwith, of any emergencies, together with a record of action taken. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc) must be maintained and available to site personnel.

2.3.14 First Aid Boxes and First Aid Equipment

The Principal Contractor and all Contractors shall appoint in writing First Aider(s). The appointed First Aider(s) are to be sent for accredited first aid training. Valid certificates are to be kept on site. The Principal Contractor shall provide an on-site First Aid Station with first aid facilities, including first aid boxes adequately stocked at all times. All Contractors with more than 5 employees shall supply their own first aid box. Contractors with more than 10 employees shall have a trained, certified first aider on site at all times.

2.3.15 Accident / Incident Reporting and Investigation

Injuries are to be categorised into first aid; medical; disabling; and fatal. The Principal Contractor must stipulate in its construction phase health & safety plan how it will handle each of these categories. When reporting injuries to the Client, these categories shall be used. All injuries shall be investigated by the Principal Contractor, with a report being forwarded to the Client forthwith. All Contractors have to report on the 4 categories of injuries to the Principal Contractor at least monthly. The Principal Contractor must report all injuries to the Client in the form of a detailed injury report at least monthly.

2.3.16 Hazards and Potential Situations

The Principal Contractor shall immediately notify other Contractors as well as the Client of any hazardous or potentially hazardous situations that may arise during performance of construction activities.

2.3.17 Personal Protective Equipment (PPE) and Clothing

The Principal Contractor shall ensure that all workers are issued and wear hard hats, safe footwear and overalls. The Principal Contractor and all Contractors shall make provision and keep adequate quantities of SABS approved PPE on site at all times. The Principal Contractor shall clearly outline procedures to be taken when PPE or Clothing

is:

- Lost or stolen;
- Worn out or damaged.

The above procedure applies to Contractors and their Sub-contractors, as they are all Employers in their own right.

2.3.18 Occupational Health and Safety Signage

The Contractor shall provide adequate on-site OHS signage. Including but not limited to: 'no unauthorised entry', 'report to site office', 'site office', 'beware of overhead work', 'hard hat area'. Signage shall be posted up at all entrances to site as well as on site in strategic locations e.g. access routes, entrances to structures and buildings, and other potential risk areas/operations.

2.3.19 Permits

Permits may include the following:

- Use of Explosives and Blasting
- Work for which a fall prevention plan is required
- Use of cradles
- Hot work
- Confined space

2.3.20 Contractors and Sub-contractors

The Principal Contractor shall ensure that all Contractors under its control comply with this Specification, the OHS Act 85/1993, Construction Regulations (July 2003), and all other relevant legislation that may relate to the activities directly or indirectly. The Contractor, when appointing other Contractors as 'Sub-contractors', shall mutatis mutandis ensure compliance.

2.3.21 Incentives and Penalties

Certain incentives will be provided for ongoing compliance to the provisions of the construction phase health & safety plan submitted by the Principal Contractor.

Penalties will be implemented for ongoing non-compliance to the provisions of the construction-phase health & safety plan as submitted by the Principal Contractor.

2.4 Physical Requirements

2.4.1 Demolition Work

It is envisaged that minor ground level demolitions are to be carried out on this project. Prior to any demolition work being carried out, the Principal Contractor shall submit a safe working procedure and a detailed engineering survey for approval by the Client. Acceptance will then be issued to the Principal Contractor to proceed with the demolition work. The Principal Contractor shall ensure that demolition work complies with the Construction Regulations (July 2003).

2.4.2 Excavations, Shoring, Dewatering or Drainage

Trenching of an approximate depth of up to 4 metres is to be carried out on this project. The Principal Contractor and any relevant Contractors shall make provision in their tender for shoring, dewatering or drainage of any excavation as per this specification.

The Contractor shall make sure that:

- a) The trench excavations are inspected before every shift and a record is kept;
- b) Safe work procedures have been communicated to the workers; Copies of which must be held in the Safety File
- c) The safe work procedures are enforced and maintained by the Contractor's Responsible Persons at all times;
- d) The requirements as per section 11 of the Construction Regulations are adhered to.

2.4.3 Edge Protection and Penetrations

The Principal Contractor must ensure that all exposed edges and openings are guarded and demarcated at all times until permanent protection has been erected. The Principal Contractor's risk assessment must include these items. E.g. protection of decking edges, finished floor slab edges, stairways, floor penetrations, lift shafts, trenches and all other openings and areas where a person may fall.

2.4.4 Explosives and Blasting

Not envisaged to be applicable on this project

2.4.5 Piling

Not envisaged to be applicable on this project

2.4.6 Stacking of Materials

The Principal Contractor and other relevant Contractors shall ensure that there is an appointed stacking supervisor and all materials, formwork and all equipment is stacked and stored safely.

2.4.7 Speed Restrictions and Protection

The Principal Contractor shall ensure that all persons in its employ, all Contractors, and all those that are visiting the site are aware and comply with the site speed restriction(s). Separate vehicle and pedestrian access routes shall be provided, maintained, controlled, and enforced.

2.4.8 Hazardous Chemical Substances (HCS)

The Principal Contractor and other relevant Contractors shall provide the necessary training and information regarding the use, transport, and storage of HCS. The Principal Contractor shall ensure that the use, transport, and storage of HCS is carried out as prescribed by the HCS Regulations. The Contractor shall ensure that all hazardous chemicals on site have a Material Safety Data Sheet (MSDS) on site and the users are made aware of the hazards and precautions that need to be taken when using the chemicals. The First Aiders must be made aware of the MSDS and how to treat HCS incidents appropriately.

2.4.9 Asbestos

Not applicable

2.5 Plant and Machinery

2.5.1 Construction Plant

"Construction Plant" includes all types of plant including but not limited to, cranes, piling rigs, excavators, road vehicles, and all lifting equipment.

The Principal Contractor shall ensure that all such plant complies with the requirements of the OHS Act 85/1993 and Construction Regulations (July 2003). The Principal

Contractor and all relevant Contractors shall inspect and keep records of inspections of the construction plant used on site. Only authorised/competent persons are to use machinery under proper supervision. Appropriate PPE and clothing must be provided and maintained in good condition at all times.

2.5.2 Vessels under Pressure (VuP) and Gas Bottles

The Principal Contractor and all relevant Contractors shall comply with the Vessels under Pressure Regulations, including:

- Providing competency and awareness training to the operators;
- Providing PPE or clothing;
- Inspect equipment regularly and keep records of inspections;
- Providing appropriate fire fighting equipment (Fire Extinguishers) on hand.

2.5.3 Fire Extinguishers and Fire Fighting Equipment

Not envisaged to be applicable on this project

2.5.4 Hired Plant and Machinery

The Principal Contractor shall ensure that any hired plant and machinery used on site is safe for use. The necessary requirements as stipulated by the OHS Act 85/1993 and Construction Regulations (July 2003) shall apply. The Principal Contractor shall ensure that operators hired with machinery are competent and that certificates are kept on site in the health & safety file. All relevant Contractors must ensure the same.

2.5.5 Scaffolding / Working at Heights

2.5.6 Not envisaged to be applicable on this project
Formwork and Support work for Structures

The formwork on this project is envisaged to be not more than two metres in height from ground level.

The Principal Contractor shall ensure that the provisions of section 10 of the Construction Regulations (July 2003) are adhered to. These provisions must include but not be limited to ensuring that all equipment used is examined for suitability before use; that all formwork and support work is inspected by a competent person immediately before, during and after placement of concrete or any other imposed load and thereafter on a daily basis until the formwork and support work has been removed. Records of all inspections must be kept in a register in the safety file on site.

2.5.7 Lifting Machines and Tackle

The Principal Contractor and all Contractors shall ensure that lifting machinery and tackle is inspected before use and thereafter in accordance with the Driven Machinery Regulations and the Construction Regulations (section 20). There must be a competent lifting machinery and tackle inspector who must inspect the equipment daily or before use, taking into account that:

- All lifting machinery and tackle has a safe working load clearly indicated;
- Regular inspection and servicing is carried out;
- Records are kept of inspections and of service certificates;
- There is proper supervision in terms of guiding the loads that includes a trained banksman to direct lifting operations and check lifting tackle;
- The tower crane bases have been approved by an engineer;
- The operators are competent as well as physically and psychologically fit to work and in possession of a medical certificate of fitness to be available on site.

2.5.8 Ladders and Ladder Work

Not envisaged to be applicable on this project

2.5.9 General Machinery

The Principal Contractor and relevant Contractors shall ensure compliance with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing, and training those who use machinery

2.5.10 Portable Electrical Tools and Explosive Powered Tools

The Contractor shall ensure that use and storage of all explosive powered tools and portable electrical tools are in compliance with relevant legislation. The Contractor shall ensure that all electrical tools, electrical distribution boards, extension leads, and plugs are kept in safe working order. Regular inspections and toolbox talks must be conducted to make workers aware of the dangers and control measures to be implemented e.g. personal protection equipment, guards, etc. Inspection records must be kept in the Safety File.

The Contractor shall consider the following:

- **A competent person undertakes routine inspections and records are kept;**
- **Only authorised trained persons use the tools;**
- **The safe working procedures apply;**
- **Awareness training is carried out and compliance is enforced at all times; and**
- **PPE and clothing is provided and maintained.**
- **A register indicating the issue and return of all explosive round;**
- **Signs to be posted up in the areas where explosive powered tools are being used.**

2.5.11 High Voltage Electrical Equipment

- **The Contractor must ensure that no high voltage electrical equipment is present on, under or above the construction area.**
- **If there are, these need to be identified and its whereabouts be made known to all operators of earthmoving equipment.**
- **The appointed excavation supervisor must direct operators in excavating around these cables.**
- **All persons in the employ of the Contractor or anyone on site must be made aware of the danger of underground electrical cables and the position thereof.**

2.5.12 Public and Site Visitor Health & Safety

This project is undertaken in a busy street with businesses trading on a daily basis directly parallel to the excavation trench.

A solid barrier of at least two metres high must be erected between the road and the trench and the trench and the business.

Access from the road to the shops over the excavation must be limited. These accesses must be of such a nature that no person or vehicle can fall into the trench when using it to cross the trench. Signage must be posted to direct members of the public to these accesses.

This barrier must be maintained in a proper condition at all times. This is important as at times it will have to be moved in order to offload or place material.

The Principal Contractor shall ensure that every person working on or visiting the site, as well as the public in general, shall be made aware of the dangers likely to arise from

site activities, including the precautions to be taken to avoid or minimise those dangers. Appropriate health and safety notices and signs shall be posted up, but shall not be the only measure taken.

Both the Client and the Principal Contractor have a duty in terms of the OHS Act 85/1993 to do all that is reasonably practicable to prevent members of the public and site visitors from being affected by the construction activities.

Site visitors must be briefed on the hazards and risks they may be exposed to and what measures are in place or should be taken to control these hazards and risks. A record of these 'inductions' must be kept on site in accordance with the Construction Regulations.

2.5.13 Night Work

Not envisaged to be applicable on this project

2.5.14 Transport of Workers

The Principal Contractor and other Contractors shall not:

- Transport persons together with goods or tools unless there is an appropriate area or section to store them;
- Transport persons in a non-enclosed vehicle, e.g. truck; there must be a proper canopy (properly covering the back and top) with suitable sitting area. Workers shall not be permitted to stand or sit at the edge of the transporting vehicle.
- Transport workers in bakkies unless they are closed/covered and have the correct number of seats for the passengers.

2.5.15 Manual Labour

A high degree of manual labours both skilled and semi skilled is required on this project. Contractors will supply workers with the necessary knowledge of the dangers of handling stones to be packed in the construction of the Gabions.

Hand protection must be worn at all times

High risk of injury to hands and body exists when working with wire. Contractors will ensure that all wire ends ends inwards.

Adequate breathing protection must be worn when cutting Geotextile to prevent the fibres to be inhaled.

2.6 Occupational Health

2.6.1 Occupational Hygiene

Exposure of workers to occupational health hazards and risks is very common in any work environment, especially in construction. Occupational exposure is a major problem and all Contractors must ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards. Prevent inhalation, ingestion, absorption, and noise induction. Site-specific health risks such as cement dust, wet cement, wood-dust, noise, etc. should be considered.

2.6.2 Welfare Facilities

The Principal Contractor must supply Sufficient toilets (1 toilet per 30 workers), showers (1 for every 15 workers), changing facilities, hand washing facilities, soap, toilet paper, and hand drying material must be provided. Waste bins must be strategically placed and emptied regularly. Safe, clean storage areas must be provided for workers to store personal belongings and personal protective equipment. Workers should not be

exposed to hazardous materials/substances while eating and must be provided with sheltered eating areas.

2.6.3 Alcohol and other Drugs

No alcohol and other drugs will be allowed on site. No person may be under the influence of alcohol or any other drugs while on the construction site. Any person on prescription drugs must inform his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suffering from any illness/condition that may have a negative effect on his/her safety performance must report this to his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suspected of being under the influence of alcohol or other drugs must be sent home immediately, to report back the next day for a preliminary inquiry. A full disciplinary procedure must be followed by the Contractor concerned and a copy of the disciplinary action must be forwarded to the Principal Contractor for his records.

Project name: _____
Date: _____

PRE-CONSTRUCTION HEALTH AND SAFETY SPECIFICATION (HSS)

Project: _____

ANNEXURE A

The Principal Contractor and Contractors must submit proof of compliance with Annexure A with the construction phase H&S plan where applicable.

HSS Item No.	Requirement	OHSA Requirement	Submission Date
2.3.1	Notification of Intention to Commence Construction / Building Work	Complete Schedule 1 (Construction Regulations)	Before commencement on site
2.3.2	Assignment of Responsible Person to Supervise Construction Work	All relevant appointments, as per OHS Act and Construction Regs.	Before commencement on site
2.3.3	Competence of Responsible Persons	Client Requirement & OHS Act	Together with H&S plan
2.3.4	Compensation of Occupational Injuries and Diseases Act (COIDA) 130 of 1993	COIDA Requirement	Together with H&S plan
2.3.5	Occupational Health and Safety Policy	OHS Act	Together with H&S plan
2.3.6	Health and Safety Organogram	Client Requirement	Together with H&S plan
2.3.7	Initial Hazard Identification and Risk Assessment based on the Client's assessment	Construction Regs.	Together with H&S plan
2.3.8	Health and Safety Representative	OHS Act	Before commencement on site
	Other		

ASSIGNMENT OF PRINCIPAL CONTRACTOR'S RESPONSIBLE PERSONS

Project: _____

ANNEXURE B

The Principal Contractor shall make the following appointments according to the initial risk assessment: (further appointments could become necessary as project progresses)

Appointment	OHSA Reference	Requirement
CEO Assignee	Section 16(2)	A competent person to assist with the on-site H&S overall responsibility – Contractor's Responsible Person
Construction Work Supervisor	CR 6.1	A competent person to supervise and be responsible of Health & Safety related issues on site. The person is appointed to assist the CEO with his/ her overall duties.
Subordinate Construction Work Supervisors	CR 6.2	A competent person to assist with daily supervision of construction / building work. The person assists the Construction Work Supervisor.
Health & Safety Representative(s)	Section 17	A competent person(s) to inspect H&S in reference to plant, machinery and Health & Safety of persons in the workplace.
Incident Investigator	GAR 9	A competent person to investigate incidents / accidents on site and could be: <ul style="list-style-type: none"> • The employer • H&S Representative • Designated person • Member of the H&S Committee
Risk assessment co-ordinator	CR 7	A competent person to co-ordinate all risk assessments on behalf of the Principal Contractor. The same applies to Contractors.
First Aiders	GSR 3	A qualified person to address all on site first aid cases.
Machinery Inspector	Section 8(2)	A competent person to supervise machinery.
Lifting machine & equipment Inspector	DMR 18	A competent person to inspect lifting machines, equipment & tackle.
Formwork & support work Inspector	CR 10	A competent person to inspect formwork & support work.
Excavation Inspector	CR 11	A competent person to inspect excavation work and ensure that approved safe working procedures are followed at all times.
Stacking Supervisor	CR 26	A competent person to supervise all stacking and storage operations.
Explosive powered tools Inspector/supervisor	CR 19	A competent person to inspect & clean the tool daily and controlling all operations thereof.
Temporary electrical installations supervisor	CR 22	A competent person to control all temporary electrical installations.

OTHER REQUIREMENTS

C3.7: PARTICULAR SPECIFICATIONS

SCOPE OF WORKS

Project: _____

ANNEXURE C

The Principal Contractor shall comply but not be limited to the following requirements: report on these to the Client at progress meetings or at least monthly whichever is sooner.

What	When	Output	Accepted by Client & date
Induction training	Every worker before he/she starts work.	Attendance registers	
Awareness Training (Tool Box Talks)	At least weekly	Attendance registers	
Health & Safety Reports	Monthly	Report covering: <ul style="list-style-type: none"> • Incidents / accidents and investigations • Non conformances by employees & contractors • Internal & External H&S audit reports 	
Emergency procedures	Ongoing evaluation of procedure	Table procedure in writing as well as tel. numbers	
Risk assessment	Updated and signed off at least monthly	Documented risk assessment	
Safe work procedures	Drawn up before workers are exposed to new risks	Documented set of safe work procedures (method statements), updated and signed off.	
General Inspections	Weekly & daily	Report OHS Act compliance: <ul style="list-style-type: none"> • Excavations • Formwork & support work • Explosive tools 	
General Inspections	Monthly	<ul style="list-style-type: none"> • Portable electrical equipment • Lifting equipment/slings 	
List of contractors	List to be updated weekly	Table list, number of workers and Company tel. numbers	
Workman's Compensation	Ongoing	Table a list of Contractors' workman's compensation proof of good standing.	
Construction site rules & Section 37.2 Mandatary Agreement	Ongoing	Table a report of all signed up Mandataries.	

ANNEXURE D
Risk Assessment

Project: _____

TASK ORIENTATED RISKS.....

DATE: _____

Rating	Task / situation	Personal protective equipment	Risk to safety	Preventative action	Risk to health	Risk to Environment

EQUIPMENT RISKS

Rating	Activity / Situation	Personal Protective Equipment	Risk to Safety	Preventative Action	Risk to Health	Risk to Environment

PHYSICAL RISKS

Rating	Situation	Personal Protective Equipment	Risk to Safety	Risk to Health	Preventative Action	Risk to Environment

ERGONOMICAL RISKS

Rating	Situation	Personal Protective Equipment	Risk to Safety	Risk to Health	Preventative Action	Risk to Environment

BEHAVIOURAL RISKS

Rating	Situation	Personal Protective Equipment	Risk to Safety	Risk to Health	Preventative Action	Risk to Environment

ANNUXURE E

Acknowledgement of receipt:

I, _____ representing

_____ Principal Contractor /

Contractor / Employer have satisfied myself with the content of the Pre-construction Health and Safety Specification and shall ensure that the Principal Contractor / Contractor and its personnel comply with all obligations / requirements in respect thereof.

Signature of Principal Contractor / Contractor **Date**

Signature of Client / Client's Agent **Date**

Comments:

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY
CONTRACT No.: PWBS-B026/22/23
Construction of Artificial Turf Grass (phase 2)

C3.7: PARTICULAR SPECIFICATIONS

SCOPE OF WORKS

C3.7.2 ENVIRONMENTAL MANAGEMENT PLAN

1

C4: SITE INFORMATION

C4.1: CONDITIONS ON SITE

C4.1 Nature of Ground

No test pit data is available

The Tenderer will be permitted to excavate trial holes in the area of the works at his own expense provided that they are properly safeguarded and reinstated. Should the Tenderer wish to excavate his own trial holes; he shall first ascertain, in conjunction with the Engineer, the position of any underground services, which may exist in the area. The Tenderer shall indemnify the Municipality against the cost of repairing any underground services damaged by the Tenderer or his agents, while carrying out such excavations.

C4.2 Spoil Material

No indiscriminate spoiling of material will be allowed. All unsuitable or surplus material shall be spoiled off site to a spoil site/municipal dump, chosen by the Contractor.

C4.3 Finishing – off the Site

The site shall be finished-off in accordance with the specifications as well as to the requirements of all applicable environmental standards.

C4.4 Existing Services

Although every effort has been made to depict existing services (water mains, electric cables, telephone cables etc.), as accurately as possible on the contract drawings, insofar as they are known, variations do arise and the Contractor shall exercise extreme care when working in the area. Items have been allowed in the Schedule of Quantities for dealing with and protecting services.

The Contractor shall take whatever precautions are required to protect these services from damage during the period of the Contract.

C4.5 Proving 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 Engineer carefully excavate by hand to expose and prove their positions.

When a service is not located in its expected position the Contractor shall immediately report such circumstances to the Engineer who will decide what further searching or other necessary action is to be carried out and shall instruct the Contractor accordingly.

Should any service be damaged by the Contractor in carrying out the works, and should it be found that the procedure laid down in this clause has not been followed than all costs in

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY
CONTRACT No.: PWBS-B025/22/23
Construction of Artificial Turf Grass (phase 2)

C4: SITE INFORMATION

SCOPE OF WORKS

connection with the repair of service will be to the Contractors account.

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 coordinated and leveled by the Contractor, and the information given in writing to the Engineer's representative.

The requirements of this clause do not relieve the Contractor of any obligations as detailed under the General Conditions of Contract or the Special Conditions of Contract.

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Construction of Artificial Turf Grass (phase 2)

C4: SITE INFORMATION

SCOPE OF WORKS

C4.2 LOCALITY PLAN

1

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Construction of Artificial Turf Grass (phase 2)

C5: ANNEXURES

SCOPE OF WORKS

C4.3 CONTRACT NOTICE BOARD

C5 ANNEXURES

C5.1 DRAWINGS

The drawings issued to tenders as part of the tender documents must be regarded as provisional and preliminary for the tenderer's benefit to generally assess the scope of work. The drawings may be issued as a separate book of drawings or else bound in as part of this document.

The work shall be carried out in accordance with the latest available revision of the drawings approved for construction (AFC)

At commencement of the contract, the Engineer shall deliver to the Contractor copies of the AFC drawings and any instructions required for the commencement of the works. From time to time thereafter during the progress of the works, the Engineer may issue further drawings for construction purposes as may be necessary for adequate construction, completion and defects correction of the works.

Drawings issued separately are listed in the Book of Drawings.

All drawings and specifications and copies thereof remain the property of the Employer, and the Contractor shall return all drawings and copies thereof to the Employer at the completion of the contract.

ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	SABS 1200 A	SECTION 1				
		PRELIMINARIES AND GENERAL FIXED CHARGES AND VALUE RELATED ITEMS				
100,00	8,30	Fixed Charges				
101,00	8,30	Contractual Requirements	Sum	1		
101,01	8,3,1	Contractual Requirements	Sum	1		
101,02		Sureties	Sum	1		
101,03		Insurance of works, etc. and damage to persons and property	Sum	1		
101,04		Third Party Insurance	Sum	1		
101,05		Workman's Compensation	Sum	1		
101,07		Dealing with water (subclause 5.5)	Sum	1		
101,08		Abution and Latrine Facilities	Sum	1		
101,09		Tools and Equipment	Sum	1		
101,10		Contract Notice Board	Sum	1		
101,11		Establishment of Facilities on the Site	Sum	1		
101,12		Removal of Site Establishment	Sum	1		
102,00	8,40	TIME RELATED ITEMS				
102,01	8,4,1	Contractual Requirements	Sum	1		
102,02		Supervision for Duration of Contract	Sum	1		
102,03		Setting Out	Sum	1		
102,04		Clearance of Site during Construction and on Completion	Sum	1		
103,00	8,4,2,1	Facilities for Contractor for the duration of Construction, except where otherwise stated				
103,01		Offices and storage sheds	Sum	1		
103,02		Contractor's initial obligation in respect of the OHS&A and Construction Regulations	Sum	1		
103,03		Contractor's time related obligation in respect of the OHS&A and Construction Regulations	Sum	1		
103,04		Submission of Health and safety file	Sum	1		
103,05		Allow for work to Undertaken by nominated environmental consultant for conducting EIA, full compliance with EMP specification and supervision during construction as directed by Project Manager.	PC Sum	1	R 100 000,00	R 100 000,00
103,06		Allow for percentage on above to cover overheads and profit	%	R 100 000,00		
103,07		Preparation of risk assessment, safe work procedures, the project H & S file, the H & S plan, the provision of PPE and protection clothing and any other H & S matters that the contractor deems necessary	Sum	1		
103,08		Allow for payment Community Liaison Officer (CLO)	PC Sum	1	R 23 000,00	R 23 000,00
103,09		Allow for percentage on above to cover overheads and profit	%	R 23 000,00		
103,10		Allow for payment Community Student (S4)	PC Sum	1	R 35 000,00	R 35 000,00
103,11		Allow for percentage on above to cover overheads and profit	%	R 35 000,00		
103,12		Allow for survey and submission of as-built survey data	Sum	1	R 50 000,00	R 50 000,00
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
200,00	SABS	SECTION 2 BILL NO. 1 EARTHWORKS				
201,00		Clear site for all rub, shrubs debris etc	m ²	13200,0		
202,00		EXCAVATION,FILLING,ETC				
202,00		EXCAVATION FOR BULK EARTHWORKS				
202,01		Removal of existing bulk topsoil, shrubs debris etc	m ³	3168,0		
202,02		EXCAVATION,FILLING,ETC				
202,03		EXCAVATION FOR BULK EARTHWORKS				
202,03		Excavation for bulk earthworks for platform not exceeding 2m deep	m ³	2232,0		
202,04		G5 material to subbase filling supplied by the contractor				
202,04		150mm thick supply and dressing	m ³	1911,0		
202,05		Compaction of surfaces				
202,06		Compaction of G5 surface including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density.	m ³	1911,0		
202,06	5.2.3.3	19mm crush stone overlaid to field surface and compacted	m ³	1274,0		
202,07		G1 material for Infill to final tolerance supplied by the contractor				
202,07		10mm thick including compaction and dressing	m ³	127,4		
202,08		Soil Insecticide:				
202,09		01 Soil poisoning to be carried out by a registered pest control company and certificate to be supplied for weed killer and termites.				
202,10		02 To horizontal field surfaces.	m ²	12740,0		
202,10		Stormwater Management				
202,11		DRAINAGE				
202,11		Class 12 Uprvc pipes				
202,11		180mm Pipes laid covered with bitum including trenches not exceeding 1m deep	m	2600		
202,12		Membrane to floors				
202,12		Supply and install geotextile membrane to floors	m ²	12740,0		
202,13		PRECAST CONCRETE				
202,13		Supply and install concrete precast kerb fig 3/6 lined with concrete base	m	440,00		
202,14		Artificial Grass Turf				
202,14		Field Equipment				
202,14		Supply and install marking with white lines; 1 set of steel Goal posts and 4 corner flags including all fittings, nets and flags	Sum	1,00		
202,15		Field Equipment				
202,15		Supply and install marking with white lines; 1 set of steel Goal posts and 4 corner flags including all fittings, nets and flags	Sum	1,00		
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
202,16		PROVISIONAL SUMS BILL NO 2 ARTIFICIAL TURF	B/F			
		01 Supply and install Slide Max Pro 50 GreenFields Synthetic Turf system with a yarn weight of 1311 gfs/qm and comprises of a diamond shaped 365 micron yarn or similar approved (Size 126m x 94m) . This includes installation and all line markings, glue, glue tape as well as FIFA required rubber infill. Warrant of 7 years minimum and 7years guarantee to be provided.	Prov Sum	1	R 4 300 000,00	R 4 300 000,00
		02 Mark up on the above item 202.16	%	R 4 300 000,00		
202,17		IRRIGATION				
		01 Supply and install a 6 percent irrigation system including all water supply reticulation, valves, times, fittings etc.	Sum	1,00	R 535 000,00	R 535 000,00
		02 Mark up on the above item 202.17	%	R 535 000,00		
202,18		INDUSTRIAL SOLAR BOREHOLE				
		01 Allow a Provisional Sum of R 500 000,00 for industrial complete unit 243m centrifugal Solar borehole solution including testing, drilling, installation of pipes, supply and install 10000l tank with galvanised steel stand and 75kw booster pump in a lockable cage as per specialist specification.	Prov Sum	1	R 500 000,00	R 500 000,00
		02 Mark up on the above item 202.18	%	R 500 000,00		
202,19		COMBINATION COURT				
		01 Allow a Provisional Sum of R 450 000,00 for construction of combination court including synthetic surface finish, including 2 sports code marked with different colour lines.	Prov Sum	1	R 450 000,00	R 450 000,00
		02 Mark up on the above item 202.19	%	R 450 000,00		
202,20		HIGH MAST LIGHTS				
		01 Allow a Provisional Sum of R 2 400 000,00 for industrial complete unit for High Mast Lights with complete wiring, switches, lights and poles .	Prov Sum	1	R 2 400 000,00	R 2 400 000,00
		02 Mark up on the above item 202.20	%	R 2 400 000,00		
Total Carried Forward to Summary						

Creighton Sports Centre

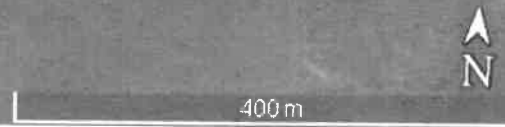
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29° 50' 23" E

Legend



Google Earth

Image © 2020 Maxar Technologies
© 2020 Google
© 2020 AirGIS (Pty) Ltd.



1230 mm

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY

CONSTRUCTION OF ARTIFICIAL TURF GRASS (PHASE 2)

Consulting Engineer	Masakhkulunge Project Managers 039 312 0856
Contractor	
Contract Duration	5 Months

Financiers:

Municipal Infrastructure Grant (MIG)



Cooperative Governance
& Traditional Affairs
Department of Cooperative Governance and Traditional Affairs
REPUBLIC OF SOUTH AFRICA

mig | Municipal
Infrastructure
Grant

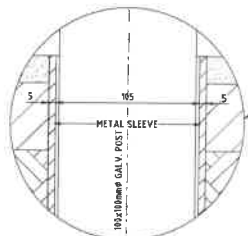


COBTA
Department:
Co-operative Governance and Traditional Affairs
PROVINCE OF KWAZULU-NATAL

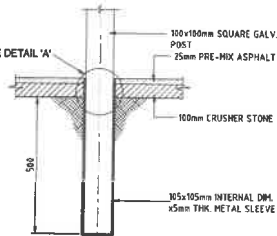


**EXPANDED PUBLIC WORKS PROGRAMME
CONTRIBUTING TO A NATION AT WORK**

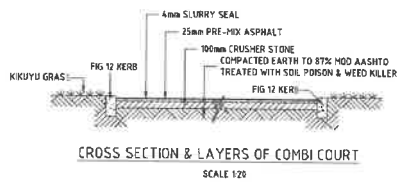
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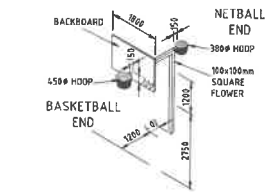
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SCALE 1:2



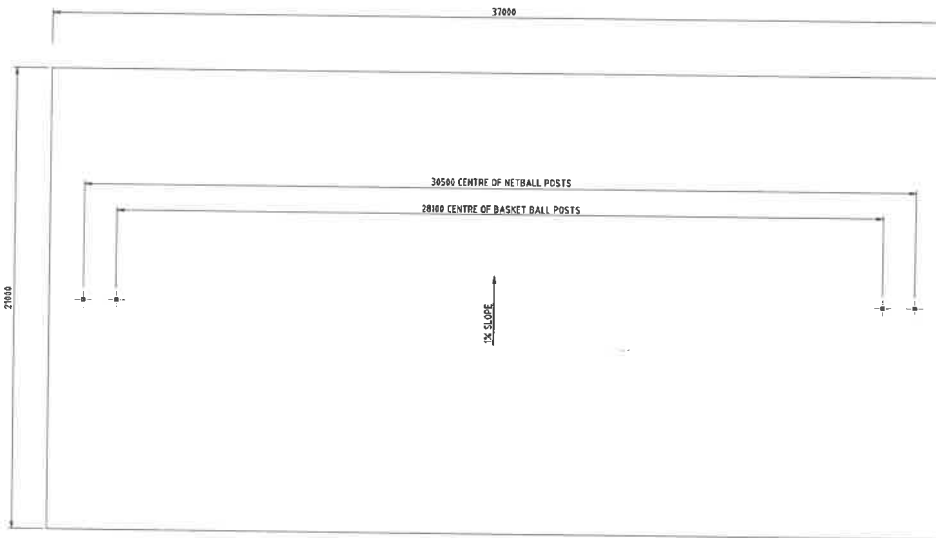
DETAIL OF POST
SCALE 1:10



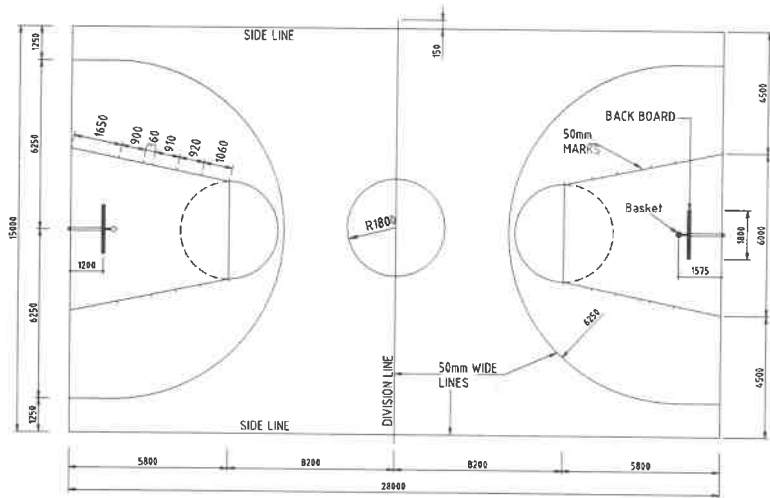
CROSS SECTION & LAYERS OF COMBI COURT
SCALE 1:20



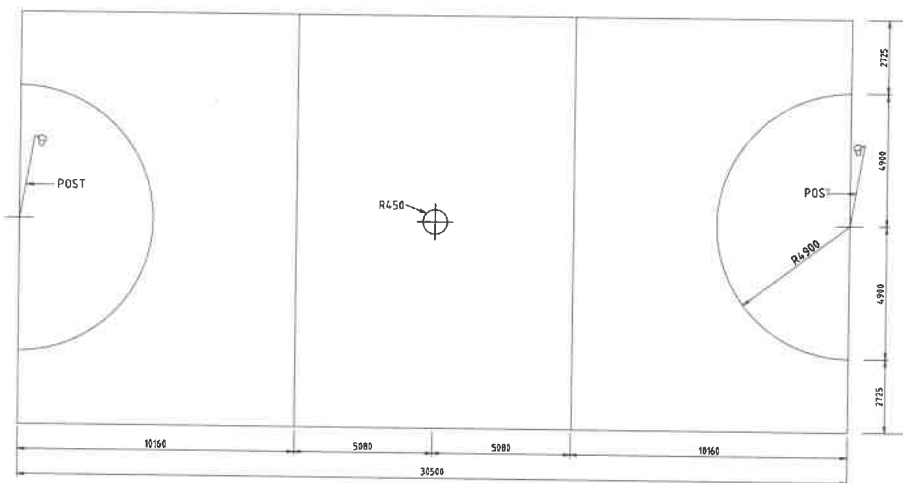
DETAIL OF COMBINED NETBALL & BASKETBALL HOOPS
SCALE 1:100



PLAN OF COMBI COURT A
SCALE 1:100



PLAN OF BASKETBALL COURT
SCALE 1:100



PLAN OF NETBALL COURT
SCALE 1:100

- All drawings to be checked and verified with the architect, any amendments, variations, additions or deletions to be made in an early stage.
- Approved drawings to be used for construction and any changes to be made must be approved by the architect before commencing work.
- All work to be done in accordance with the SANS 10400.

- GENERAL NOTES:**
- ALL MATERIALS & WORKMANSHIP TO BE IN ACCORDANCE WITH SANS 10400 SPECIFICATIONS AND CODES OF PRACTICE.
 - READ THE DRAWING IN CONNECTION WITH THE ENGINEER'S AND SURVEYOR'S OR CIVIL ENGINEER'S DRAWINGS & DETAILS, WHICHEVER MAY BE APPLICABLE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND CONSENTS FROM THE LOCAL AUTHORITY IN ADVANCE OF COMMENCING ANY WORK.
 - SHOULD ANY DISCREPANCY EXIST BETWEEN ANY DIMENSIONS AND/OR SPECIFICATIONS AND/OR SPECIFICATION THE CONTRACTOR SHALL BE NOTIFIED WITHOUT DELAY AND HE WILL TAKE THE FINAL DECISION.
 - SHOULD DEVIATION FROM THE DETAILS BE DEEMED THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING APPROVAL FROM THE LOCAL AUTHORITY IN ADVANCE OF COMMENCING ANY WORK.
 - ALL ESTIMATIONS OF THE LOCAL AUTHORITY AND/OR STATUTORY BODY WITH REGARD TO CONSTRUCTION AND/OR THE SITE AND THE USE SHALL BE STRICTLY ADHERED TO.
 - ONLY THE DRAWING WITH THE MOST RECENT REVISION WILL BE VALID, UNLESS IT IS REPLACED BY A WRITTEN INSTRUCTION.
 - ONLY WRITTEN DIMENSIONS SHALL BE USED.
 - FINISHES MUST ALWAYS BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
 - DAMPSCREES UNDER ALL WINDOW SILLS AND WALLS.
 - CONCRETE SANDWICH CONCRETE UNDER ALL FLOORING.
 - ALL ELECTRICAL AND PLUMBING WORK MUST BE CARRIED OUT IN ACCORDANCE WITH LOCAL AUTHORITY REGULATIONS.
 - WATERS MUST BE SOLID AT ALL JOINTS.
 - ALL ELECTRICAL CONNECTIONS MUST BE TIED WITH METAL WIRE.
 - ALL WORK MUST BE CARRIED OUT STRICTLY IN ACCORDANCE TO THE LOCAL AUTHORITY REGULATIONS.
 - ALL INTERNAL PLASTER MUST HAVE A SMOOTH FINISH.
 - ALL WINDOWS MUST BE APPROVED DESIGN.
 - ALL WALLS LONGER THAN 2500mm MUST BE PROVIDED WITH BRICKWORK IN EVERY THIRD LAYER.

- DRAINAGE NOTES:**
- LETTS TO BE PROVIDED AT ALL BEYOND AND BENEATH.
 - LETTS TO BE PROVIDED AT 2m OF STRAIGHT LENGTH AT CHANGE OF DIRECTION AND AT ALL OTHER CONNECTIONS WITH HANDED COVERS AT GROUND LEVEL.
 - LETTS IN FLOORS TO BE WITHOUT BRICK CONNECTIONS.
 - LETTS TO BE ENCASED IN 100mm CONCRETE WHEN OCCURRING UNDER CONSTRUCTION, NOT TO EXHAUST FROM EXHAUST AND NOT TO BE AT GROUND LEVEL.
 - ALL VENT PIPES ARE TO EXTEND 300mm ABOVE WINDOW HEAD.
 - MINIMUM INVERT LEVEL OF DRAIN 450mm.
 - MINIMUM FALL OF DRAIN 1:100.
 - MINIMUM FALL OF DRAIN EXCEEDING 1:100 RACE DROPS TO BE PROVIDED TO ENURE MINIMUM FALL OF 1:15.
 - DRAIN PIPES EXCEEDING 100mm TO HAVE 100mm VENT PIPE.
 - 100mm VENT PIPE AT HEAD OF DRAIN WITH 100mm AIRVALVE.
 - WHEN ONE PIPE SYSTEM IS APPLIED, ANTI-SIPHON VENT PIPES TO BE 100mm.
 - WHEN PIPES 100mm AND 150mm P.V.C.
 - WHEN PIPES 100mm AND 150mm P.V.C. TO BE FULLY ACCESSIBLE OVER FULL LENGTH.
 - ALL PLUMBING AND DRAINAGE WORK TO BE CARRIED OUT BY A REGISTERED PLUMBING CONTRACTOR.
 - ACCESS PANELS TO BE PROVIDED AT ALL SANITARY FITTINGS.
 - ACCESS PANELS TO SEWER DUCTS TO BE PROVIDED.

- FOUNDATION NOTES:**
- FOUNDATIONS ARE SUBJECT TO ALTERATIONS AS EXCAVATIONS PROCEED.
 - NO FOUNDATIONS ARE TO BE CAST UNTIL EXCAVATIONS HAVE BEEN APPROVED.
 - FOUNDATIONS ARE TO BE STRICTLY IN ACCORDANCE WITH ENGINEER'S SPECIFICATIONS.
 - LOCAL AUTHORITY TO BE NOTIFIED PRIOR TO POURING OF FOUNDATION.
 - TOP OF CONCRETE FOUNDATION FOOTING TO BE NO LESS THAN 400mm BELOW FINISHED GROUND LEVEL.
 - OVERLAP AT JOINTS TO BE NO LESS THAN 200mm PER JOINT.
 - CONCRETE FOOTING TO BE NO LESS 300mm THICK BUT SEE DRAWINGS FOR DETAILS AND DIMENSIONS.

- ABBREVIATIONS:**
- MBD WASH HAND BASIN
 - WC WATER CLOSET
 - S SINK
 - SHW SHOWER
 - B BATH
 - BB BIDDET
 - CONC CONCRETE
 - PREP PREPARATION BOWL
 - RESPECTION EYE
 - ROOFING EYE
 - G GULLY
 - VENT PIPE
 - MANHOLE
 - INVERT LEVEL
 - REINFORCED CONCRETE
 - SAFETY GRATES

FOR APPROVAL

DRAWING BY: DR. NKOSAZANA DLAMINI-ZUMA	SCALE: 1:100	SHEET: 1 OF 1
DESIGNED BY: DR. NKOSAZANA DLAMINI-ZUMA	DATE: 15/05/2024	PROJECT: PORTS CENTRE - C - 005 - T - 00
CHECKED BY: DR. NKOSAZANA DLAMINI-ZUMA	DATE: 15/05/2024	
APPROVED BY: DR. NKOSAZANA DLAMINI-ZUMA	DATE: 15/05/2024	

NO.	DATE	REVISION DESCRIPTION	BY	CHKD BY	DATE

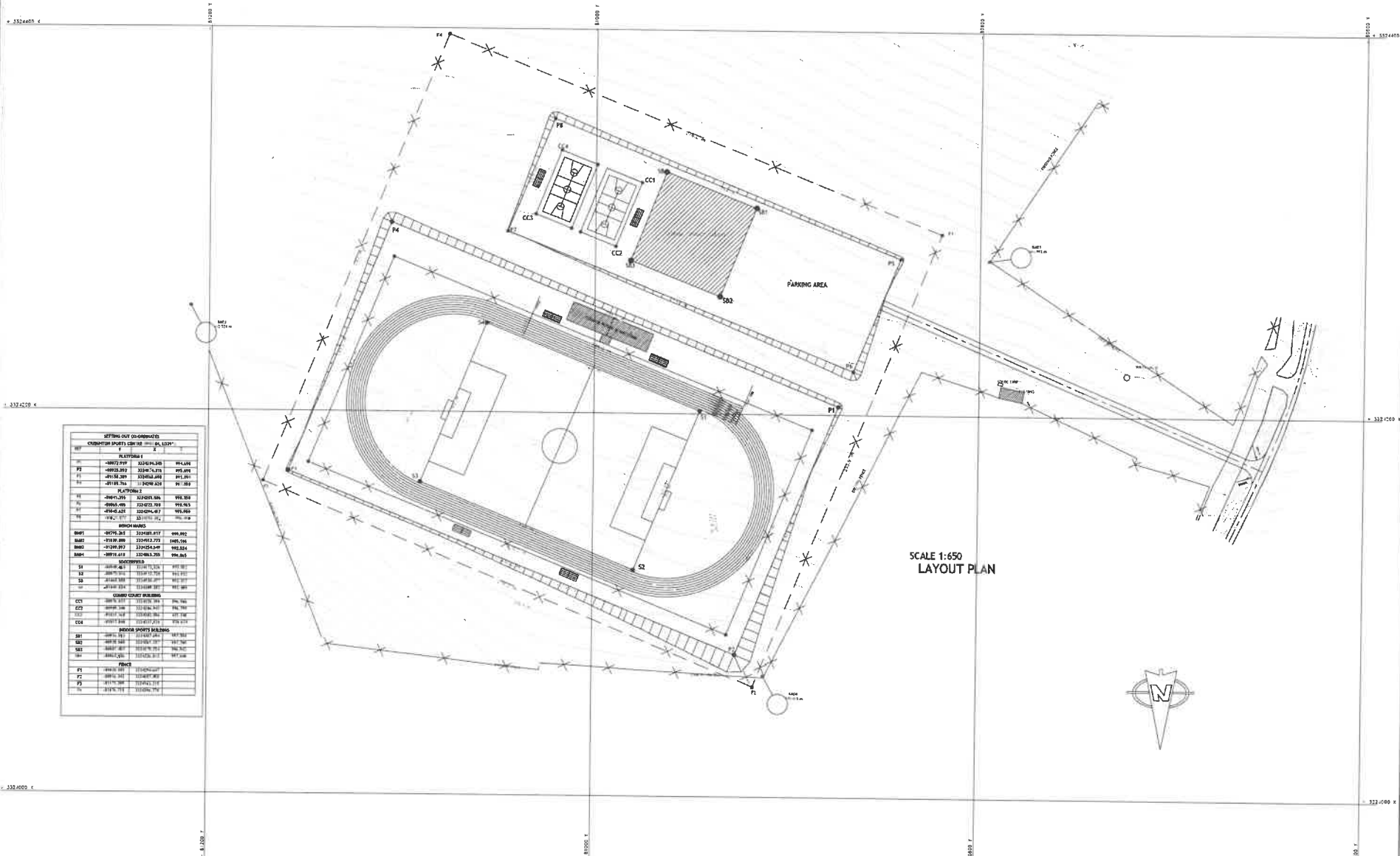
RESPONSIBILITY	NAME	SIGNATURE
DESIGNED BY	DR. NKOSAZANA DLAMINI-ZUMA	
DRAWN BY	DR. NKOSAZANA DLAMINI-ZUMA	
CHECKED BY	DR. NKOSAZANA DLAMINI-ZUMA	
APPROVED BY	DR. NKOSAZANA DLAMINI-ZUMA	

MASAKHEKULUNGE PROJECT MANAGERS

DR. NKOSAZANA DLAMINI-ZUMA
LOCAL MUNICIPALITY

CONSTRUCTION OF CREIGHTON SPORTS CENTRE

COMBO COURT DETAILS



SCALE 1:650
LAYOUT PLAN

SETTING OUT CO-ORDINATES			
POINT	EASTING (M)	NORTHING (M)	REMARKS
STATION I			
ST	10872.727	12254.135	STATION
P1	10872.822	12254.135	POINT
P2	10872.822	12254.135	POINT
P3	10872.822	12254.135	POINT
STATION II			
ST	10872.727	12254.135	STATION
P1	10872.822	12254.135	POINT
P2	10872.822	12254.135	POINT
P3	10872.822	12254.135	POINT
STATION III			
ST	10872.727	12254.135	STATION
P1	10872.822	12254.135	POINT
P2	10872.822	12254.135	POINT
P3	10872.822	12254.135	POINT
STATION IV			
ST	10872.727	12254.135	STATION
P1	10872.822	12254.135	POINT
P2	10872.822	12254.135	POINT
P3	10872.822	12254.135	POINT
STATION V			
ST	10872.727	12254.135	STATION
P1	10872.822	12254.135	POINT
P2	10872.822	12254.135	POINT
P3	10872.822	12254.135	POINT
STATION VI			
ST	10872.727	12254.135	STATION
P1	10872.822	12254.135	POINT
P2	10872.822	12254.135	POINT
P3	10872.822	12254.135	POINT
STATION VII			
ST	10872.727	12254.135	STATION
P1	10872.822	12254.135	POINT
P2	10872.822	12254.135	POINT
P3	10872.822	12254.135	POINT
STATION VIII			
ST	10872.727	12254.135	STATION
P1	10872.822	12254.135	POINT
P2	10872.822	12254.135	POINT
P3	10872.822	12254.135	POINT

- GENERAL NOTES:**
1. ALL MATERIALS & WORKMANSHIP TO BE IN ACCORDANCE WITH SANS 1040 & PROFESSIONAL CODES OF PRACTICE.
 2. READ THIS DRAWING IN CONJUNCTION WITH THE ENGINEER'S LAYOUT AND/OR OTHER SPECIALISTS DRAWINGS & DETAILS WHICH MAY BE APPLICABLE.
 3. THE CONTRACTOR SHALL NOTIFY THE SUPERVISOR CONSULTANT AT LEAST 7 DAYS BEFORE ANY COMMENCEMENT OF WORK.
 4. SHOULD ANY DISCREPANCY EXIST BETWEEN ANY SPECIFICATION AND THE DRAWING, THE CONTRACTOR SHALL NOTIFY THE SUPERVISOR CONSULTANT IMMEDIATELY AND HE SHALL TAKE THE FINAL DECISION.
 5. SHOULD DEVIATION FROM THE DRAWING BE REQUIRED, A WRITTEN APPROVAL SHALL BE OBTAINED FROM THE SUPERVISOR CONSULTANT.
 6. ALL DIMENSIONS OF THE LOCAL AUTHORITY AND/OR STATUTORY BODY WITH RESPECT TO CONSTRUCTION SHALL BE STRICTLY ADHERED TO.
 7. ONLY THE DRAWING WITH THE MOST RECENT REVISIONS WILL BE VALID, UNLESS IT IS REPLACED BY A WRITTEN APPROVAL.
 8. ONLY WRITTEN DIMENSIONS SHALL BE USED.
 9. CONCRETE SHALL BE CAST IN 200mm THICK WALLS TO DAMPCOURSE UNDER ALL WINDOWS, GABLES AND WALLS.
 10. CONCRETE SUBMERGED CHANNELS SHALL BE 100mm DEEP.
 11. ALL ELECTRICAL AND PLUMBING WORK MUST BE CARRIED OUT IN ACCORDANCE WITH LOCAL AUTHORITY REGULATIONS.
 12. ALL WORK MUST BE CARRIED OUT STRICTLY IN ACCORDANCE TO DIMENSIONS GIVEN.
 13. ALL INTERNAL PLASTER MUST HAVE A SMOOTH FINISH.
 14. ALL WINDOWS MUST BE APPROVED DESIGN.
 15. ALL WALLS LOWER THAN 2000mm MUST BE PROVIDED WITH BRICKFORCE IN EVERY THIRD LAYER.

- DRAINAGE NOTES:**
1. LOTS TO BE PROVIDED AT ALL BENCH AND JUNCTIONS.
 2. LOTS TO BE PROVIDED AT 50% OF STAIR LENGTH AT CONNECTION WITH BENDED CONCRETE AT BROAD LEVEL CONNECTIONS.
 3. ALL PIPES TO BE INSTALLED IN 100mm CONCRETE WHEN OCCURRING UNDER CONSTRUCTION, NOT TO EXPOSE TO WEATHER AND MUST BE COVERED WITH 100mm VENT PIPE.
 4. ALL VENT PIPES ARE TO EXTEND 300mm ABOVE WINDOW HEAD.
 5. MINIMUM FLOOR LEVEL OF DRAIN IS 100mm ABOVE FINISHED FLOOR LEVEL.
 6. MINIMUM FALL OF DRAIN IS 1:100.
 7. WHERE FALL OF DRAIN EXCEEDS 1:100, BAGG DROPS TO BE PROVIDED TO ENSURE MAXIMUM FALL OF 1:100.
 8. DRAIN PIPES EXCEEDING 100mm TO HAVE 100mm VENT PIPE.
 9. 100mm VENT PIPE AT HEAD OF DRAIN WITH 100mm AIRVALVE.
 10. WHERE ONE-PIPE SYSTEM IS APPLIED, ANTI-SIPHON VENT PIPE TO BE 100mm.
 11. WASTE PIPES 100mm AND 150mm R.V.C.
 12. WASTE PIPES TO HAVE PERIOD TRAPS AND TO BE FULLY ACCESSIBLE OVER FULL LENGTH.
 13. ALL PLUMBING AND DRAINAGE WORK TO BE CARRIED OUT BY A REGISTERED PLUMBING CONTRACTOR.
 14. PLE TRAPS TO BE PROVIDED AT ALL SANITARY FITTINGS.
 15. ACCESS PANELS TO BEWER DUCTS TO SANITARY.

- FOUNDATION NOTES:**
1. FOUNDATIONS ARE SUBJECT TO ALTERATIONS AS EXCAVATIONS PROCEED.
 2. NO FOUNDATIONS ARE TO BE CAST UNTIL EXCAVATIONS HAVE BEEN APPROVED.
 3. FOUNDATION TRENCHES TO BE STRICTLY IN ACCORDANCE WITH ENGINEER'S SPEC.
 4. LOCAL AUTHORITY TO INSPECT TRENCHES PRIOR TO POURING OF FOUNDATION.
 5. TOP OF CONCRETE FOUNDATION FOOTING TO BE NO LESS THAN 400mm BELOW FINISHED GROUND LEVEL, OVERLAY AT STEP TO BE NO LESS THAN 100mm R.C. STEP.
 6. CONCRETE FOOTING TO BE NO LESS THAN 300mm THICK BUT SEE DRAWINGS FOR DETAILS AND DIMENSIONS.

- ABBREVIATIONS:**
- W/W WASH HAND BASIN
 - WC WATER CLOSET
 - SHOWER
 - BATH
 - BIKET
 - CONCRETE
 - PREPARED BENCH
 - INSPECTION EYE
 - ROOFING EYE
 - W/ VENT PIPE
 - W/ GULLY
 - W/ TRAP
 - W/ BRICKLE
 - W/ SOCKET LEVEL
 - W/ REINFORCED CONCRETE
 - W/ SAFETY GLASS

FOR APPROVAL

DATE	BY	SCALE	NO.	REVISION
10/11/2011	J.M.	1:650	001	A1

PROJECT DESCRIPTION: CONSTRUCTION OF CREIGHTON SPORTS CENTRE

CLIENT: DR. NKOSAZANA DLAMINI-ZUMA LOCAL MUNICIPALITY

PROJECT LOCATION: [Address]

PROJECT NO.: [Number]

DATE: 10/11/2011

SCALE: 1:650

NO.: 001 - T - 00

NO.	REVISION	DATE	BY	SCALE	NO.	REVISION

RESPONSIBILITY	NAME	SIGNATURE
DESIGNED BY		
DESIGN CHECKED		
DRAWING CHECKED		
DATE		

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NAME	QUALIFICATION	CAPACITY