

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECT

SALIGNA AVENUE: WARD 3

TENDER N° PWBS-B023/22/23

C1.4 : FORM OF GUARANTEE

Tender No. PWBS-B023/22/23

WHEREAS

(hereinafter referred to as "the Employer") entered into, a Contract with

.....

(hereinafter called "the Contractor") on the day of 20

for the construction of

at

AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of a guarantee for the due and faithful fulfilment of such Contract by the Contractor;

AND WHEREAS

has/have at the request of the Contractor, agreed to give such guarantee;

NOW THEREFORE WE,

do hereby guarantee and bind ourselves jointly and severally as Guarantor and Co-principal Debtors to the Employer under renunciation of the benefits of division and exclusion for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Completion Date which the Employer may make, give, concede or agree to under the said Contract.
2. This guarantee shall be limited to the payment of a sum of money
3. The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.
4. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.
5. Our total liability hereunder shall not exceed the Guaranteed Sum of
.....(R)

6. The Guarantor reserves the right to withdraw from this guarantee by depositing the Guaranteed Sum with the beneficiary, whereupon our liability hereunder shall cease.

7. We hereby choose our address for the serving of all notices for all purposes arising here from as

IN WITNESS WHEREOF this guarantee has been executed by us at
on thisday of 20

As witnesses:

- 1. Signature
- 2. Duly authorized to sign on behalf of

Address

.....
.....
.....

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECT

SALIGNA AVENUE: WARD 3

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C1.5 : ADJUDICATOR'S AGREEMENT

This agreement is made on theday of between:

of (name of company/organisation)

and (address)
company/organisation) (name of

of

Parties) and (address) (the

..... (name)

of

..... (address)

(the Adjudicator).

Disputes or differences may arise/have arisen* between the Parties under a Contract dated and known as

and these disputes or differences shall be/have been* referred to adjudication in accordance with the CIBD Adjudication Procedure, (hereinafter called "the Procedure") and the Adjudicator may be or has been requested to act.

** Delete as necessary*

IT IS NOW AGREED as follows:

1. The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.
2. The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.
3. The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure as set out in the Contract Data.

4. The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.

5. The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

SIGNED by: _____ SIGNED by: _____ SIGNED by: _____

Name: _____ who warrants that he / she is duly authorised to sign for and on behalf of the first Party in the presence of _____
 Name: _____ who warrants that he / she is duly authorised to sign for and on behalf of the first Party in the presence of _____
 Name: _____ who warrants that he / she is duly authorised to sign for and on behalf of the first Party in the presence of _____

Witness Name: _____ Witness Name: _____ Witness Name: _____
 Address: _____ Address: _____ Address: _____

Date: _____ Date: _____ Date: _____

Contract Data

1.	The Adjudicator shall be paid at the hourly rate of R..... in respect of all time spent upon, or in connection with, the adjudication including time spent travelling.
2.	The Adjudicator shall be reimbursed in respect of all disbursements properly made including, but not restricted to: <ul style="list-style-type: none"> a) Printing, reproduction and purchase of documents, drawings, maps, records and photographs. b) Telegrams, telex, faxes and telephone calls. c) Postage and similar delivery charges. d) Travelling, hotel expenses and other similar disbursements. e) Room charges. f) Charges for legal or technical advice obtained in accordance with the Procedure.
3.	The Adjudicator shall be paid an appointment fee of R This fee shall become payable in equal amounts by each Party within fourteen (14) days of the appointment of the Adjudicator, subject to an Invoice being provided. This fee will be deducted from the final statement of any sums which shall become payable under item 1 and/or item 2 of the Contract Data. If the final statement is less than the appointment fee, the balance shall be refunded to the Parties.
4.	The Adjudicator is/is not* currently registered for VAT.
5.	Where the Adjudicator is registered for VAT, it shall be charged additional in accordance with the rates current at the date of Invoice.
6.	All payments, other than the appointment fee (item 3) shall become due seven (7) days after receipt of invoice, thereafter interest shall be payable at 5 % per annum above the Reserve Bank base rate for every day the amount remains outstanding.

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SALIGNA AVENUE: WARD 3

TENDER N° PWBS-B023/22/23

C1.6 : HEALTH AND SAFETY AGREEMENT

AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993

THIS AGREEMENT is made between DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY
(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 authorised 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

Tender No:
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 Amendment 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 authorised 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 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
the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECT

SALIGNA AVENUE: WARD 3

TENDER N° PWBS-B023/22/23

C1.7: TRANSFER OF RIGHTS

TRANSFER OF RIGHTS AND INDEMNITY (To be completed during construction by successful Tenderer only)

Claim for materials on site, Payment Certificate No. Date:

Contract No: For (contract title)

I, the undersigned (name of signatory) of (name of Contractor) as..... of (name of Contractor)

duly authorised hereto on behalf of the Contractor hereby transfer, cede and assign all the Contractor's rights, title and interest in and to the materials and goods, for which evidence of bona fide ownership is attached hereto, unto and in favour of (name of Employer) Insofar as the Contractor retains actual control of the materials and goods, the right of ownership thereof passes to the Employer by *constitutium possessorium*.

I herewith indemnify the Employer against any claim to and in respect of said materials by reason of the Contractor's sequestration or liquidation or of any defect in the Contractor's title to the materials and agree that no payment for materials on site will be made by the Employer until such time as I have submitted documentary proof of bona fide ownership of the said materials and goods.

This transfer shall become effective upon conclusion of the Contractor receiving payment from the Employer or from any other person on behalf of the Employer for the materials and goods as Materials on Site, payment of retention money thereon excluded.

I further confirm that I am fully responsible for all materials and goods listed under this Transfer of Rights and that they have been insured adequately against all risks and will remain insured until they are built into or used in the permanent works and taken over by the Employer.

This certificate of Transfer of Rights applies only to the materials and goods as listed in the following table.

DESCRIPTION OF ITEM	UNIT	QUANTITY	RATE	AMOUNT	SUPPLIER
TOTAL VALUE OF MATERIALS AND GOODS					

Signed by: **Date:**

for and on behalf of the Contractor.

Witnessed by: **Date:**

NOTE: This form, together with the documentary proof of ownership or proof of payment by the Contractor to the supplier, shall accompany the Contractor's claim for payment for materials on site in terms of Clause 49.1.5 of the General Conditions of Contract 2004

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECT

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C1.8 : RETENTION MONEY GUARANTEE

Employer: (name).....
(address)

Contract No:
(Contract title)

The guarantee is issued on behalf of

Registration No (hereinafter referred to as "the Contractor") in connection with the above-mentioned contract (hereinafter referred to as "the Contract").

Whereas you have agreed that the Contractor may provide a guarantee in lieu of the whole or portion of the retention monies provided for under the Contract.

Now therefore we, the undersigned, being duly authorised to represent
(full name of guarantor) registration number..... undertake to pay you such amounts as you may from time to time demand from us, immediately upon receipt of a written demand from you.

1. Each demand shall be in writing and delivered to us at or such other address as we shall in writing notify to you.
2. Our liability to make the payments herein referred to shall be unconditional and not be affected or diminished by any disputes, claims or counterclaims between the Employer and the Contractor.
3. Our aggregate liability under this guarantee is limited to R..... *(in words*) and is restricted to payment of monies only.
4. This guarantee shall expire on the date on which the last of the retention monies, which but for this guarantee would have been retained by the Employer, becomes payable to the Contractor.
5. This guarantee is neither negotiable nor transferable and must be returned to us against final payment of our aggregate liability or on the date of the expiry of the guarantee in terms of Clause 4 (above), whichever is the earlier.

Signed at..... for and on behalf of
on this the day of in the year 20.....

GUARANTOR:

WITNESSES: 1..... 2.....

Name..... Name

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECT

SALIGNA AVENUE: WARD 3

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PART C2 : PRICING DATA

C2.1 Pricing Instructions

C2.2 Bill of Quantities

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECT

SALIGNA AVENUE: WARD 3

TENDER N° PWBS-B023/22/23

C2.1 : PRICING INSTRUCTIONS

PREAMBLE TO THE BILL OF QUANTITIES

- C2.1.1.1 The Contract Data, the Scope of the Work and the Site Information are to be read in conjunction with the Bill of Quantities. Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standardised Specifications. The payment Clause of each Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardised Specification, or the Scope of Work, conflict with the terms of the Bill, the requirements of the Standardised or Scope of Work, as applicable, shall prevail.
- C2.1.1.2 The Bill of Quantities comprises items covering the Contractor's profit and costs of general liabilities and of construction of temporary and permanent Works.
- C2.1.1.3 The clauses in a specification in which further information regarding the billed item can be obtained appear under "Payment Refers" in the Bill. The reference clauses indicated are not necessarily the only sources of information in respect of billed items. Further information and set specifications may be found elsewhere in the contract documents. Standardised Specifications are identified by the item item numbers in the COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition).
- C2.1.1.4 The Tenderer is at liberty to insert a rate of his own choosing for each item in the Bill but his attention is drawn to the fact that the Contractor has the right, under various circumstances, to payment for additional Works carried out and that the Employer's Agent is obliged to base his assessment of the rates to be paid for such additional work on the rates inserted in the Bill.
- C2.1.1.5 The measurement and payment clauses of each Specification, read together with the relevant clauses of the Specification Data, set out what ancillary or associated activities are included in the rate for the operations specified.
- C2.1.1.6 The Bill of Quantities has been drawn up generally in accordance with the latest issue of the SANS Standardized Specifications. Descriptions in the Bill are abbreviated and must be read in conjunction with the measurement and payment clauses of the applicable Specifications.
- C2.1.1.7 Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.
- C2.1.1.8 All the rates tendered and inserted in the Bill of Quantities shall be **exclusive** of VAT. Provision has been made on the Summary Page of the Bill of Quantities for the addition of

VAT. Except that they shall not include Value Added Tax (VAT), the rates to be inserted in the Bill of Quantities are to be the full inclusive rate to the Employer for the work described under each item. Such rates shall cover all costs and expenses that may be required in and for the construction of the work described and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based.

C2.1.1.9 Notwithstanding C2.1.1.8 above, all rates tendered and inserted in the Bill of Quantities against each item shall be deemed to be inclusive of the Contractor's labour cost for all permanent unskilled, semi-skilled, skilled and supervisory staff. All other labour costs in terms of local labour employed in terms of Sub Clauses 4.3.5 and 4.3.6 of the Conditions of Contract, shall be payable to the Contractor as listed and detailed under Section 1: Preliminary and General of the Bill of Quantities.

C2.1.1.10 A rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no rate has been entered will be considered to have a rate of R 0, 00.

C2.1.1.11 The Tenderer must price and extend each item, total each page and carry the total of each section in the Bill of Quantities to the Summary page.

C2.1.1.12 Attention is drawn to Clause 6.7 of the Conditions of Contract and the Contractor must not order the quantities of materials stated in the Bill of Quantities until he has confirmed from the construction drawings or measurement on Site that such quantities are in fact the correct quantities. The quantities set out in the Bill of Quantities are the estimated quantities of the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Employer's Agent from time to time. The final Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

C2.1.1.13 The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

C2.1.1.14 Except where rates only are required, the Tenderer shall insert all amounts to be included in his total tendered price in the "Amount" column and show the corresponding total tendered price.

C2.1.1.15 Arithmetical errors of responsive tenders shall be corrected in the manner specified under the Standard Conditions of Tender. (Refer also CIDB Practice Note No. 2 dated August 2006)

C2.1.1.16

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

%	=	percent
hr	=	hour
ha	=	hectare
kg	=	kilogram
kl	=	kilolitre
km	=	kilometre
km-pass	=	kilometre-pass
kPa	=	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
L/sum	=	lump sum
£	=	ton (1000 kg)
W/day	=	work day
months	=	months
veh/month	=	vehicle month
man-day	=	each flagman per day

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECT

SALIGNA AVENUE: WARD 3

TENDER N° PWBS-B023/22/23

C2.2 : BILL OF QUANTITIES

SALIGNA AVENUE: WARD 3
PWBS-B023/22/23 WARD 10

Item	Description	Unit	Sch. Qty	Rate	Amount
1200	GENERAL REQUIREMENTS AND PROVISIONS				
B12.01	Relocating and Modification: a) Provisional sum for existing services to be relocated and or protected during construction	P/Sum	1	R 30 000,00	R 30 000,00
B12.06	Checking of setting out of proposed works by consultants' surveyor	P/Sum	1	R 35 000,00	R 35 000,00
B12.19	Handling of Water on Site: Supply Water Pump and all other items to De-Water Excavations during construction	L/Sum	1		
1300	CONTRACTORS ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS				
13.01	Contractors General Obligations				
	a) Fixed Obligations	L/Sum	1		
	b) Value Related Obligations	L/Sum	1		
	c) Time Related Obligations	Mth	4		
B13.02	OCCUPATIONAL HEALTH AND SAFETY ACT AND CONSTRUCTION REGULATIONS				
	a) Contractors Initial / Fixed Obligations	L/Sum	1		
	b) Submission of Health and Safety File	L/Sum	1		
	c) Contractor's time related obligations	Mth.	4		
	d) Environmental Control Officer	P/Sum	1	R 60 000,00	R 60 000,00
	e) Learnership (Student/Graduate)	P/Sum	1	R 60 000,00	R 60 000,00
	f) Community Liaison Officer @ R4600/mth	P/Sum	1	R 25 000,00	R 25 000,00
	g) Personal Protective Equipment	L/Sum	1		
B13.04	a) Establish Name Boards	No.	4		
Total Carried forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
1500	ACCOMMODATION OF TRAFFIC				
15.01	Accommodating Traffic and Maintaining temporary Deviations	Km	0.5		
B 15.03	a) Flagmen	man-days	192		
	b) Portable Stop and Go Signs	No	2		
	e) Road Signs, R-and TR Series	No	4		
	f) Road Signs, TW Series	No	4		
	h) Delineators				
	i) Single	No	30		
	j) Traffic Cones	No	30		
15.04	Relocation of Traffic Control Facility	L/Sum	1		
Total Carried forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
1600	OVERHAUL				
16.01	Overhaul on Material hauled in excess of 0.5km	m ³ .km	460		
16.02	Overhaul on Material hauled in excess of 1.0km	m ³ .km	2000		
Total Carried forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
1700	CLEAR AND GRUB				
L17.01	Clearing and Grubbing	ha	0,1		
17.02	Removal and Grubbing of Large Trees and Stumps				
	a) 0m to 0.5m	No.	3		
	b) 0.5m to 1.0m	No.	2		
	c) 1.0m to 2.0m	No.	2		
	d) Girth Exceeding 2.0m	No.	1		
BL 17.07	Topsoil stripping to stockpile for later use	m3	25		
BL 17.08	Trim Trees overhanging onto the road verge	P/Sum	1	R 25 000.00	R 25 000.00
Total Carried forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
2100	DRAINS Excavations for Open Drains				
L21.01	Excavations for Open Drains a) Excavating soft material situated within the following depth ranges below the surface level 1) 0m up to 1.5m	m3	30		
	b) Extra Over Sub Item 21.01 (a) for excavation in hard material irrespective of depth	m3	10		
Total Carried forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
2200	PREFABRICATED CULVERTS				
L22.01	Excavation a) Excavating soft material situated within the following depth ranges below the surface level 1) 0m up to 1.5m b) Extra Over Sub Item 21.01 (a) for excavation in hard material Irrespective of depth	m3	120		
L22.02	Backfilling a) Using the excavated material	m3	80		
22.03	Concrete Pipe Culverts c) On Class C Bedding 2) 450mm dia. Type 100D 3) 600mm dia. Type 100D	m	15		
L22.17	Manholes, Catchpits, Precast inlet and outlet structures i) Headwalls Masonry as per STD Details SD0406 a) 450 dia. pipe b) 600mm dia. pipe ii) Drop Inlet b) As per STD Detail Sd 0602/B including transitions, and HD Cover (1.2m x 1.2m slabs in lieu of grid iron covers iii) Side Inlets a) As per STD Details SD 0703/A including transitions and 1.2m x 1.2 m cover slabs	No	6		
B22.29	Allow Provisional Sum for drainage on Polo Way	No	2		
		P/Sum	1	R200000.00	R 200 000.00
Total Carried forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
2300	CONCRETE KERBING, CONCRETE CHANNELLING				
L23.01	Concrete Kerbing				
	a) Precast Kerbing as per SABS 927 - Fig. 12	m	50		
L23.02	Concrete Kerb Channel Combination				
	a) Figure 6 Kerb with 300mm wide grade 20mPa channel	m	415		
L23.04	Cast in situ concrete chutes (measured by components)				
	a) Concrete				
	1) Class 20/19	m3	5		
	b) Formwork				
	2) F2 finish	m2	20		
L23.07	Trimming of Excavations for concrete open lined drains				
	a) In soft material	m2	400		
	b) In hard material	m2	5		
L23.08	Concrete linings for open drains				
	1) Cast in situ concrete grade 25mPa /20mm	m3	45		
L23.09	Class F2 Finish Formwork to cast insitu concrete				
	b) To side with Formwork on both internal and external faces (each face measured)	m2	60		
	c) to ends of slabs	m2	20		
L23.10	Sealed Joints in concrete linings of open drains				
	a) Polysulphide sealant	m	250		
L23.12	Steel Reinforcing: Mesh Wire Ref. 245	m2	450		
L23.16	Excavate for kerb and channel in all materials	m	300		
L23.17	Saw Cut	m	150		
Total Carried forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
31.00	BORROW MATERIAL				
31.01	Excess Overburden	m3	100		
31.03	Finishing of Borrow areas b) Intermediate materials	ha	0,1		
Total Carried forward to Summary					

Item	Description	Unit	Sch. Qty.	Rate	Amount
33.00	MASS EARTHWORKS				
33.01	Cut and borrow to fill including 1 km free haul a) Gravel material in compacted layer thickness 200mm or less 2) Compacted to 93% of MOD AASHTO Density	m3	200		
33.03	Extra Over Item 33.02 for excavating and breaking down material in: a) Intermediate Excavation b) Hard Excavation	m3	50		
33.04	Cut to Spoil including free haul up to 1km. Material obtained from a) Soft Excavation b) Intermediate Excavation	m3	1400		
B33.09	Material Bladed to Windrow and Reinstate a) 250mm Bladed to windrow b) Reinstate - 250mm Compacted to 93% MOD	m3	600		
33.10	Roadbed Preparation and the compaction of material b) Compaction to 90% MOD AASHTO Density	m3	350		
L33.13	Finishing off Cut and fill slopes a) Cut slopes b) Fill slopes	m2	1000		
L33.15	Extra Over Item. 33.04 for excavation by hand in restricted areas: a) Excavating 350mm deep in existing materials at intersections and remove to Spoil	m3	10		
L33.16	Provision of material for backfilling behind Kerb and Channels	m3	10		
Total Carried forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
34.00	PAVEMENT LAYERS OF GRAVEL				
B34.01	Pavement Layers constructed from gravel obtained from commercial sources d) Gravel Sub base (Chemically stabilised material) compacted to: 1) 97% of Modified AASHTO Density (250mm thickness, minimum G6 material)	m3	600		
Total Carried forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
35.01	STABILISATION				
35.01	Chemical Stabilisation (250mm). Extra Over Unstabilised Compacted Layers - Sub-Base Layer	m3	600		
	a) Sub Base				
	1) 250mm Thickness				
35	Chemical Stabilising Agent				
	a) Ordinary Portland Cement	tons	65		
Total Carried Forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
36.00	CRUSHED STONE BASE				
36.01	Crushed Stone Base				
	c) Construct from Type G2 material obtained from commercial sources and compacted to 102% Mod AASHTO Density – 150mm				
	37.5mm nominal size	m3	350		
LB36.5 0	Sweeping of Base Course in preparation for Prime	m2	1950		
Total Carried Forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
41.00	PRIME COAT				
LB41.0 1	MC 30 Cut back bitumen (10%)	m2	1950		
L41.02	Aggregate for Blinding	m2	1950		
Total Carried Forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
42.00	ASPHALT BASE AND SURFACING				
42.01	Asphalt Surfacing (Continuous Grade - Mix D)				
	a) Continuous Graded				
	iii) 40mm Thick	tons	250		
L42.02	Tack Coat	Litres	1000		
Total Carried Forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
B56.00	ROAD SIGNS				
LB56.0 1	Allow Provisional sum for road signs	P. Sum	1	R 25 000,00	R 25 000,00
Total Carried Forward to Summary					R 25 000,00

Item	Description	Unit	Sch. Qty	Rate	Amount
B57.00	ROAD MARKING				
LB57.0 1	Allow Provisional sum for road marking	P. Sum	1	R 30 000,00	R 30 000,00
Total Carried Forward to Summary					R 30 000,00

Item	Description	Unit	Sch. Qty	Rate	Amount
58.00	LANDSCAPING AND PLANTING PLANTS				
L58.01	Trimming				
	b) Hand Trimming	m2	1000		
L58.03	Preparing the areas for grassing:				
	c) Topsoiling within the road reserve where the following materials are used				
	ii) Topsoiling obtained from other sources by the contractor including all freehaul	m3	50		
	e) Providing and Applying chemical fertilisers and / or soil improvement materials				
	iv) Formular 2:3:2 (22)	m3	100		
	Placing of Topsoil (100mm Thick)	m3	100		
L58.04	Grassing				
	c) Hydroseeding				
	iii) Hydro seeding	ha	0,1		
Total Carried Forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
59.00	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59	Finishing the Road and Road Reserve: b) Single Carriageway	km	0,6		
Total Carried Forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
81.00	TESTING MATERIALS AND WORKMANSHIP				
B81.02	Other Special Tests Requested by the Engineer				
	a) Cost of testing	PC Sum	1	R100000,00	R 100 000,00
	b) Handling Cost and Profit in respect of sub item B81.02 (a) above	%		R100000,00	
Total Carried Forward to Summary					

Item	Description	Unit	Sch. Qty	Rate	Amount
D1000	DAYWORKS				
D1.01	Compactors				
	a) Vibrating Roller (Smooth) 10t	hr	27		
D1.04	Excavators				
	a) Rubber tyred min. 50kw	hr	27		
D1.06	Trucks				
	a) Water Tanker (up to 7000 litre)	hr	27		
D1.07	TLB 4 x 4	hr	27		
D1.07	Motor Grader	hr	27		
D1.08	Foreman	hr	27		
D1.10	a) Semi - Skilled	hr	27		
	b) Unskilled	hr	27		
Total Carried Forward to Summary					

UNDERBERG ASPHALT SURFACING ROADS PHASE 4
PWBS-B023/22/23 WARD 3 – SALIGNA AVENUE

SUMMARY OF SECTIONS		
ITEM	SECTION	AMOUNT
1200/1300	General Requirements and Provisions / Establishment	
1500	Accommodation of Traffic	
1600	Overhaul	
1700	Clearing and Grubbing	
2100	Drains	
2200	Prefabricated Culverts	
2300	Concrete Kerbing, Concrete Channelling, Chutes	
3100	Borrow Materials	
3300	Mass Earthworks	
3400	Pavement Layers of Gravel Material	
3500	Stabilisation	
3600	Crushed Stone Base	
4100	Prime Coat	
4200	Asphalt Base and Surfacing	
B5600	Road Signs	R 25 000,00
B5700	Road Markings	R 30 000,00
5800	Landscaping and Planting Plants	
5900	Finishing Road and Road Reserve	
8100	Testing Materials and Workmanship	
D1000	Dayworks	
	SUBTOTAL	
	ADD CONTINGENCIES @ 10%	
	SUBTOTAL	
	ADD 15% VAT	
	TOTAL CARRIED FORWARD TO FORM OF OFFER	

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECTS

SALIGNA AVENUE: WARD 3

TENDER N° PWBS-B023/22/23

PART C3 : SCOPE OF WORK

- C3.1 Description of the Works**
- C3.2 Engineering**
- C3.3 Procurement**
- C3.4 Construction**
- C3.5 Management**
- C3.6 Particular Specification**

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECTS

SALIGNA AVENUE: WARD 3

TENDER N° PWBS-B023/22/23

C3.1 : DESCRIPTION OF THE WORKS

C3.1.1 EMPLOYER'S OBJECTIVES

The Employer requires the following: -

- Upgrade 292m of Saligna Avenue from gravel road to 6m wide blacktop.
- Construct concrete lined V-drains and kerb and channel.
- Clean existing stormwater pipes and install new pipes where required.
- Construct new stormwater inlet and outlet structures.
- Associated road signs.
- Attend to the stormwater on Polo Way.

The Employer desires that the work required for the construction be of a high standard, completed in the shortest practical time whilst making maximum use of local labour in accordance with Expanded Public Works program.

The construction works shall be in accordance with the Occupational Health and Safety Act (Act 85 of 1993).

C3.1.2 OVERVIEW OF THE WORKS

The contract comprises the upgrading of 295m of Saligna Avenue from gravel to blacktop along the existing alignment and stormwater on Polo Way.

C3.1.3 EXTENT OF THE WORKS

Work included in this contract involves the following:

- 300m of 6m wide blacktop surface with concrete lined V-drains and kerb and channel.
- 300m of minimum 1.0m wide concrete lined v-drains and 300m of kerb and channel.
- Stormwater crossings and structures and gabion protection works.
- Construction of driveway accesses.
- Regulatory and Warning signs.

Existing Services

- Buried services to be located and protected or re-located

Accommodation of traffic / pedestrians

- Temporary access or alternative routes (for both vehicles and pedestrians) are to be provided if necessary
- Appropriate temporary signage shall be displayed at all works locations

As-built surveys

- As-built survey of all permanent works, including services (relocated and/or proved)

Construction methods must be such that no property or life is endangered. The Employer accepts no responsibility for work that is done outside the site boundaries without the Engineer's approval.

The Contractor must program his work in such a way that no construction is to be done during the prescribed holiday periods as set out in the Contract Data.

The completion of the construction program and any amendments thereto during the course of construction shall be at the cost of the Contractor and shall not be measured elsewhere in this contract.

RECOMMENDED BY:

APPROVED BY:



Mr. S.V. MNGADI
SENIOR MANAGER: PWBS



MR.N.C. YEZI
MUNICIPAL MANAGER

C3.1.4

LOCATION OF WORKS

The site is situated in WARD 10
Refer to C4.1 for a Locality Plan.

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECTS

SALIGNA AVENUE: WARD 3

TENDER N° PWBS-B023/22/23

C3.2 : ENGINEERING

C3.2.1 DESIGN SERVICES AND ACTIVITY MATRIX

Works designed by, per design stage:

Concept, feasibility and overall process	Employer (Engineer)
Basic engineering and detail layout to tender stage	Employer (Engineer)
Final design to approved for construction stage	Employer (Engineer)
Temporary works	Contractor
Information for preparation of "as built" drawings	Contractor
Preparation of as-built drawings and closeout	Employer (Engineer)

C3.2.2 DRAWINGS

The drawings listed below are provided and shall form part of the contract documentation. Additional or revised construction drawings will, in terms of Clause 13.1 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.

CIVIL DRAWINGS	
Drawing Number	Drawing Description
UA1214-01-001-LYT-T-00	General Road Layout Plan
UA1214-01-002-LYT-T-00	General Road Layout Plan: km 0+000 to km 0+120
UA1214-01-003-LYT-T-00	General Road Layout Plan: km 0+120 to km 0+240
UA1214-01-004-LYT-T-00	General Road Layout Plan: km 0+240 to km 0+292
UA1214-01-005-IS-T-00	Long Section
UA1214-01-006-CS-T-00	Cross Sections
UA1214-01-007-DET-T-00	Standard Details

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECTS

SALIGNA AVENUE: WARD 3

TENDER N° PWBS-B023/22/23

C3.3 : PROCUREMENT

C3.3.1 PREFERENTIAL PROCUREMENT PROCEDURES

C3.3.1.1 Requirements

As per the Dr Nkosazana Dlamini Zuma Municipality Preferential Procurement Policy.

This document shall be made available from the Employer on the contractor's request

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY MIG PROJECTS

SALIGNA AVENUE: WARD 3

TENDER N° PWBS-B023/22/23

C3.4 : CONSTRUCTION

STANDARD SPECIFICATIONS

C3.4.1 Standard Specifications

For the purposes of this Contract the latest issues of the following specifications shall be applicable:

- COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (1998)
- SANS 10396: 2003: Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures
- SANS 1914 - 1 to 6 (2002): Targeted Construction Procurement
- SANS 1921 - 1 (2004): Construction and Management Requirements for Works Contracts
- SANS 1921 - 2 (2004): Accommodation of Traffic on Public Roads Occupied by the Contractor.
- South African Road Traffic Signs Manual (May 2012)

STATUS

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

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

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

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

The standard specifications which form part of this contract have been written to cover all phases of work normally required for road contracts, and they may therefore cover items not applicable to this particular contract.

PART A: GENERAL

PS-1 GENERAL DESCRIPTION OF THE PROJECT

Upgrade 300m of Saligna Avenue from gravel road to 6m wide blacktop

PS-2 DESCRIPTION OF THE WORK

This description is a broad outline of the contract works and does not limit the work to be executed by the Contractor in terms of the Contract. The quantities of some of the major items indicated in this section are indicative, not absolute, and are provided to define in general terms, the overall scope of the project.

Approximate quantities of each type of work to be carried out in accordance with the contract documents are listed in the Schedule of Quantities of this Document.

2.1 Location of the project

Refer to C3.1.4 Location of Works above.

2.2 The Site

The Contractor shall confine his operations to the road reserves of the roads and a portion of the road reserves of the intersecting roads. He shall take all necessary precautions to avoid damaging existing services, buildings, roads, fences, etc. The Contractor shall make good any damage to such services and structures at his own expense.

2.3 Access to the Site

Saligna Avenue is located within the Underberg CBD and can be accessed from the R617. Polo Way can be accessed from the R617 or from the Sani Road.

The operation of construction vehicles on existing roads shall be limited to traffic with an axle load not exceeding that allowed by the Road Traffic Ordinance of the authority concerned, or any amendment thereof.

The Contractor, in making use of existing roads for hauling of materials to or from the site, shall be held responsible to clear any spillage caused by his activities on or near the roads by whatever means necessary, within two (2) days of such spillage occurring. No additional payment will be made for the clearance of spillage and all relevant costs will be deemed to be covered under the relevant items.

2.4 Nature of the work

The nature of the work included in this Contract is for the upgrading of gravel roads to blacktop and related stormwater. The work is to be undertaken by Contractors with the necessary expertise, resources and previous experience of constructing civil engineering works of a similar nature and order.

Labour-intensive construction methods shall be used wherever possible but especially in areas where the work can be set out in tasks. Work such as: -

- Excavation and backfilling of trenches for pipe crossings;
- Excavations and backfilling for kerb and channel and concrete lined v-Drains;
- Concrete works for the kerb and channel and side drains;
- Construction of inlets and headwalls and any gabion protection works;
- Sweeping of the base for priming;
- Application of prime and tack coat;
- Installation of road signs and line marking

In pursuance of the adoption of labour-intensive construction methods and RDP principles, the Contractor shall be required to undertake training of members of the local population. The Contractor shall train nominated community members as bricklayers, pipe-layers, skilled labourers, etc. Refer to Part G of this document. Work done under labour-intensive methods shall be done on task-based methods. Payment to the Contractor for labour-intensive methods shall however be made as per the tendered unit rates.

2.5 Detailed description of the project

The detailed description of the works shall be as per C3.1 above

2.6 Areas for Stockpiling or Spoiling of Material

Construction materials may be temporarily stockpiled in areas as agreed by the Engineer / Employer and local community.

All spoil material shall be hauled to and disposed of at sites agreed by the Engineer and local community and on completion of the work the sites are to be landscaped and vegetated.

2.7 Liaison with Community Leaders

In order to ensure the successful and uninterrupted completion of the Contract, liaison meetings will be held at least every two weeks with the Community Liaison Officers (CLO's) appointed by the local ward Councillors / PSC. It will be the Contractor's responsibility to arrange these formal meetings and shall distribute minutes between the CLO's, the Engineer's Representative and himself. Communications and negotiations with regard to the employment of local labour, spoil areas etc, must be maintained throughout the contract duration.

The Contractor shall be responsible to reimburse the CLO for the entire duration of the contract at the prescribed rate of **R4600** per month.

2.8 Materials Information

A materials investigation is being undertaken and the materials investigation report will be handed to the successful contractor on appointment.

2.9 Proposed Training and Construction Programme

Tenderers must submit with their Tender comprehensive details of their proposed training and construction programme for the portion of the works to be constructed by conventional methods and the portion to be constructed by labour-intensive methods.

The Tenderer shall state in the Appendix to the Form of Tender the time for completion. Within five days after awarding the contract, the Contractor shall submit his programme to the Engineer for approval, in the form of a bar chart, showing clearly in addition to the requirements of Clause 12 of the General Conditions of Contract:

- (a) the proposed rate of progress in order to complete the works within the required period as stated in the Appendix, stating the various activities and their duration for each element of the works in sufficient detail to be able to gauge construction progress;
- (b) the Contractor's plant commitment on the contract;
- (c) critical path activities;
- (d) his anticipated value of work (cash flow) to be done during each month;
- (e) the training arranged by the Contractor for the nominated persons; and
- (f) the number of trainees in each discipline.

When preparing a construction programme, the Contractor must note the following:

- (a) All work is to be completed within Four (4) months, inclusive of any number of 'Construction Industry Holidays' in December and January which may occur, and all 'Special non-working days'.
- (b) Allowance must be made for expected delays due to normal rainy weather as defined in PS 2.10.

(c) Allowance must be made for 'Special non-working days' as described in C1.2: Contract Data Provided by the Employer.

(d) Allowance for any time required for accommodation of vehicular or pedestrian traffic to comply with the stated requirements in terms of maintaining access

2.10 Climate

The rainfall records applicable in respect of this Contract are those recorded at Underberg and shall be those used for calculating the extension of the Time for Completion on account of abnormal rainfall. The values of N_n and R_n as noted in Contract Data are to apply:

2.11 Minimum Local Resources Target

1. Labour

It is a requirement of this contract that the minimum labour target value sourced from Local Municipal area is 15 number of the local labour. Remuneration local labour rate must be a minimum of **R 170/task/day**

2. Materials

It is a requirement of this contract that the minimum materials target value sourced from the Nkosazana Dlamini Zuma District Municipality area is 60% of the total contract value.

3. Penalties

The targets stated above are the minimum. On completion of the contract the actual local resources utilised in the contract will be measured. In the event of the Contractor not meeting the target, the following penalties will be payable.

Resource	Minimum (part of total Contract value)	Deviation (less) than target	Penalty of Contract value	Total
Labour	20%	For each 1%	0.5%	
Materials	38%	For each 1%	0.75%	

2.11.1 Labour

It is recognized that the construction of a project such as this, requires the use of skilled personnel. Where possible however, local labour is to be used for all unskilled construction operations.

A PSC has been established and is a vital means of communication between all parties involved with the project. The composition of the PSC comprises representation by the Employer, the Engineer and formal structures within all the affected communities.

The contractor shall make use of these communication channels and shall appoint from amongst his site personnel a responsible person to participate in the affairs of the PSC, and this representative may be also required to attend the monthly PSC meetings.

It is mandatory that the Contractor shall interact with the community via proactive project liaison and project participation by its leaders and constituted organisations and forums, as well as through the employment of its people, and these activities shall constitute essential facets of the project.

Local labour is to be used and the employment of such labour is to be done in conjunction with the PSC. The PSC has formed a Labour Committee who shall assist the Contractor with the recruitment of local labourers to ensure an equal distribution of people employed between the various Amakhrosi in the area.

2.12 Existing Services

Contractor is to prove, protect and maintain all existing services encountered on site for the duration of the contract and would be required to remove, realign or temporarily replace services as required under this contract.

Where the service owner is required to relocate their services, the contractor shall liaise with the service owner to determine the extents and timeframe of the relocation and to incorporate this information in his own programme and works methodology. The contractor may not refuse the service owner access to the site and shall provide the service owner sufficient space to do the relocations in a safe and logical method. The programming of the relocations shall be negotiated between the contractor and service provider.

Where necessary, the relocation / protection of services shall be done by the contractor under the supervision of the service owner.

2.13 Security

The provision of security for the Contractor's Site Establishment shall be his own responsibility, and no claims for additional security measures taken during the currency of the contract will be considered other than as provided for in Clause 54 of the Conditions of Contract.

It is the responsibility of the Contractor to provide adequate security for the material on site and the works. Together with good community liaison and involvement, it is possible to maintain the risk at an acceptable level and have a successful project.

PS-3 ENVIRONMENTAL IMPACT CONTROL

Respect for the environment is important for this Contract. The environmental control of the site shall be governed by the Environmental Management Programme (EMPr) included in Particular Specification C3.3 of this document, which provides *inter alia*, for:

- (a) The Contractor must allow for the satisfactory combating of dust and noise nuisance over the full extent of the construction work, for the duration of the Contract.
- (b) The Contractor must make provision for the prevention of excessive erosion and siltation in the construction area and in particular on adjacent land. Should excessive erosion and/or siltation take place outside the road reserve as a direct result of the Contractor's construction activities it will be the Contractor's responsibility to make good the erosion/siltation to the satisfaction of the landowner and the Engineer, all at the cost of the Contractor.
- (c) No littering by construction workers shall be allowed. A refuse control system shall be established for the collection and removal of refuse to the satisfaction of the Engineer.
- (d) Adequate provision shall be made for temporary toilet requirements in construction areas. Use of the veld for this purpose shall not be allowed under any circumstances.
- (e) Streams, rivers and dams shall be protected from direct or indirect spillage of pollutants, such as refuse, garbage, cement, concrete, sewage, chemicals, fuels, oils, aggregate tailings, wash water, organic materials and bituminous products. In the event of spillage, prompt action shall be taken to clear the affected area. Emergency measures in the event of spillage must be set out and the responsible person made aware of the required action. The construction of temporary and or

permanent dams must be done with the necessary approvals from the Department of Water Affairs and Forestry and Environmental Affairs and Tourism.

- (f) Bituminous and/or other hazardous products shall not be spoiled on site and may only be disposed of in licensed, authorised disposal facilities.
- (g) Control of invader species of plants.
- (h) Clearing shall be limited to sports field area and under the relevant site clearance items in the bill of quantities

PS-4 CONTRACTOR'S CAMP SITE

Possible sites for the Contractor's camp site will be indicated at the site inspection.

The Contractor must take full cognizance of the regulations regarding the clearing of bush and felling of trees and no tree may be removed without the written permission of the Engineer and Employer. In establishing and maintaining the camp site, due cognizance is also to be taken of COLTA 1300.

The standard of the Contractor's camp, offices, accommodation, ablutions and other facilities must comply with the regulations of the relevant authority. Details of the facilities to be provided are to be submitted to the Engineer for approval.

The Contractor is to familiarize himself and comply with, all local by-laws and Government Regulations pertaining to the employment, transport and accommodation of labour.

PS-5 FACILITIES FOR THE ENGINEER

No special facilities are required for the Engineer.

All quality control tests will be undertaken by a commercial laboratory.

PS-6 POWER SUPPLY AND OTHER SERVICES

The Contractor shall make his own arrangements for the supply of electricity and other services. No direct payment shall be made for the provision of such services. The cost thereof shall be deemed to be included in the rates tendered for the various items of work for which these services are required or in the contractors Preliminary and General items.

PS-8 RECORD DRAWINGS

As the work progresses, the Contractor shall keep full records of all amendments to and deviations from the drawings as issued to the Contractor at the start of the contract. The true positions, invert levels and ground levels of all services exposed or encountered, as well as the cover levels, shall be indicated on the drawings. Record drawings are to be completed as work progresses and will be signed at progress meetings. The completion certificate shall only be issued after the Engineer has received a properly marked up set of record drawings and a ground and services survey in a format to be agreed. The survey shall be based on the same datum and trigonometric points as the issued construction drawings. Should this aspect not be strictly adhered to, the Engineer may withhold payment of all related items until the Contractor complies with this clause. A separate payment has been allowed for this service, and all costs related thereto shall be deemed to be included in the related item.

PS-10 PROTECTION OF PRIVATE PROPERTY

The Contractor shall take all the necessary steps to protect private property during construction. All fences, buildings, lean-tos, etc. shall be protected against damage that may arise as a result of the Contractor's operations on site. The Contractor shall bear the cost of the repair of any damage to any private property, damaged as a result of the Contractor's operations on site.

The Contractor shall also provide access to the existing dwellings / businesses at all times. Where it is necessary to restrict access, the contractor shall obtain written permission from residents / business owners describing the extents and duration of the restriction. Full access shall always be provided outside of working hours or on non-working days.

The contractor shall nominate a safety representative who shall be available at all times to deal with incidents or problems on the site, whether caused by the contractors works or not. The contact details of the representative shall be provided to the Employer, Engineer, local traffic / policing authorities and local community representatives. This requirement shall also apply should the contract extend across any site closure periods.

PS-11 COMMUNICATIONS EQUIPMENT

The Contractor is to arrange for his own telephone / cell phone / fax on site, which is to be made available to the Engineer or his representative for official purposes during working hours. All costs associated hereto shall be the responsibility of the Contractor.

PS-12 DEALING WITH WATER

The contractor shall be responsible for dealing with all water during the construction from what ever source, and the cost of all de-watering, unless otherwise itemised in the Schedule of quantities, shall be deemed to be included in the tender price if a zero rate has been submitted.

C3.2: PROJECT SPECIFICATIONS

PART B: AMENDMENTS TO THE STANDARD SPECIFICATIONS

B1 PROJECT SPECIFICATIONS RELATING TO THE STANDARD SPECIFICATIONS AND OTHER ADDITIONAL SPECIFICATIONS

In certain clauses in the Standard Specifications, allowance is made for a choice to be specified in the Project Specifications between alternative materials or methods of construction, and for additional requirements to be specified to suit a particular contract. Details of such alternatives or additional requirements applicable to this Contract are contained in this part of the Project Specifications. It also contains the necessary additional specifications required for this Contract.

The clauses and payment items dealt with in this part of the Project Specifications are numbered 'PS' with a number corresponding to the relevant clause or item number in the Standard Specifications.

New clauses and payment items not covered by clauses or items in the Standard Specifications have been included here and have also been designated with the prefix 'PS'. Such clauses and items have been given a new number following upon the last number used in the particular section referred to in the Standard Specifications.

COLTO Standard Specifications for Road and Bridge Works for State Road Authorities

B1300 CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

Add the following new item:

Number	Item Description	Unit
PS B13.02	Occupational Health and Safety Act and Construction Obligations	

- | | |
|--|----------|
| (a) Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations | Lump Sum |
| (b) Submission of the Health & Safety File to the Employer complete, and to the satisfaction of the Employer | Lump Sum |
| (c) Time-related obligations for the updating and mending the risk assessments, the safe work procedures, the project H&S file and the H&S plan, and for full compliance with all H&S matters during construction of the works under the contract. | month |

Payment of the rates tendered under this item shall for include full compensation for all the contractor's charges and obligations in respect of compliance with the relevant OHS Act and the Construction Regulations.

- (i) The lump sum tendered under sub item (a) shall represent full compensation for the fixed part of the contractor's obligations, ie that part which is substantially fixed and is not a function of the time required for completion of the contract and includes, but not limited to the following:
- Preparation of risk assessments,
 - Safe work procedures,
 - Project Health and Safety file,
 - Health and Safety plan, and
 - Any other Health and Safety matters that the contractor deems necessary.

Payment shall only be made once the Employer or Engineer are satisfied that all the conditions have been put in place or approved.

- (ii) The lump sum tendered under sub item (b) shall represent full compensation for the completing and checking of the Project Health and Safety file and handing over to the Employer on completion of the Works.

Payment shall only be made once the Employer or Engineer are satisfied that the file is complete and have acknowledged this in writing to the Contractor.

- (iii) The tendered rate per month for sub item (c) represents full compensation for that part of the contractor's obligations which are mainly a function of time and includes, but not limited to, the following:

- Updating and amending
 - The risk assessment,
 - Safe work procedures,
 - The Project Health and Safety file,
 - The Health and Safety plan, and
- Full compliance with all Health and Safety matters during construction of the Works.
- Employment (or appointment) of a Safety Officer

The Safety Officer shall be available and contactable on a full-time basis to deal with any issues as they arise. The Safety Officer may have other duties on the project, but these duties shall not prohibit them from performing the requisite Health & Safety functions, as required, in a timely and responsible way. The Safety Officer shall also attend all project and progress meetings.

B1500 ACCOMMODATION OF TRAFFIC

B1517 MEASUREMENT AND PAYMENT

Add the following:

The Contractor's obligation under this Section 1500 shall not be measured or paid for directly (except as hereinafter provided for) and compensation for the work involved to comply with these obligations shall be deemed to be covered by the rates and amounts tendered for the various items of work included under this Contract.

Replace payment item 1501 item with the following:

Number	Item Description	Unit
PS B15.01	Accommodating traffic and the provision and maintaining of diversions	Lump Sum

The unit of measurement shall be lump sum and shall include full compensation for accommodating traffic and providing, and maintaining temporary diversions as stipulated under in sub clauses B1502 and B1503(g). The tendered sum shall also include full compensation for the provision of communications equipment required for regulating the traffic, the provision and re-use of all temporary traffic control signs, flagmen, barricades, and New Jersey barrier complying with the legal requirements of all authorities concerned, for providing temporary access to private property, and for the provision and maintenance of temporary drainage.

The tendered sum shall also include full compensation for the specified general requirements and all incidental items of cost which are required under the provisions of Section 1500.

The accommodation of traffic and the provisioning and maintenance of diversions shall be measured once only for a particular work area irrespective of the type of work to be executed or the number of times necessary to accommodate traffic over any particular part of the road.

The provision of signage and flagmen shall be based on the requirements of SARTSM Vol 2

Payment of the lump sum shall be made on a pro-rata monthly basis"

SECTION B1800: DAYWORKS

CONTENTS

B1801 SCOPE
B1802 GENERAL REQUIREMENTS
B1803 MEASUREMENT AND PAYMENT

B1801 SCOPE
This section covers the method of measurement and payment for work carried out on a daywork basis.

B1802 GENERAL REQUIREMENTS
Work will be classified as daywork only if the Employer's Agent considers no other rate in the schedule of quantities appropriate for payment purposes.

An instruction regarding all work to be carried out under daywork in terms of Clause 6.5 of the General Conditions of Contract will be issued at the discretion of the Employer's Agent. Some or all of the items priced under daywork in the schedule of quantities may possibly not be required for this Contract.

Before ordering any material, the Contractor shall submit quotations to the Employer's Agent for his approval, and shall submit such receipts or vouchers to the Employer's Agent as may be necessary for proving the amount claimed.

B1803 MEASUREMENT AND PAYMENT

Item	Unit
B18.01	Vehicles, plant and equipment:
(a)	(As specified) hour (hr)

The daywork rates submitted for vehicles, constructional plant and equipment, subitem (a), in the schedule of quantities shall be a hire charge for the use of the vehicle and driver or constructional plant/equipment and operator (excluding VAT) and shall apply only to vehicles, constructional plant and equipment approved in writing by the Employer's Agent. The rate shall include for maintenance, fuels and oils and other operating costs, establishment, insurance and other contingency costs relating to the running of the vehicle, plant or equipment.

Where there is ambiguity between the power developed at the flywheel and mass of a machine, the power shall govern the measurement category.

The Contractor and the Employer's Agent will agree on the method of recording the working hours prior to the commencement of the work. Any long period of idling at any one time which in the opinion of the Employer's Agent or his representative is beyond that required for normal operating conditions will not be paid for as working time. Non-working hours for any reason shall not be measured for payment.

The tendered rates shall also include full compensation for all administrative costs, supervision, overheads, liabilities and obligations related to the running of the vehicles, constructional plant and equipment. The tendered rates shall be subject to the Contract Price Adjustment Factor laid down in the General Conditions of Contract.

Item	Unit
B18.02	Labour:
(a)	Labourer.....hour
(b)	Artisan.....hour
(c)	Supervisor.....hour

The daywork rates submitted for labour in the schedule of quantities shall be the cost of labour for each skill level and shall apply only to the number of workers approved in writing by the Employer's Agent.

The rates shall be for normal working hours and shall be increased pro rata for overtime at the standard rate applicable if the work performed outside working hours is approved in writing by the Employer's Agent.

The tendered rates shall also include full compensation for overhead charges, profit, liabilities, obligations, site supervision, the use of hand tools, appliances, equipment and for consumable stores. The tendered rates shall be subject to the

Contract Price Adjustment Factor laid down in of the General Conditions of Contract.

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C3.5 : MANAGEMENT

C3.5.1 MANAGEMENT OF THE WORKS

C3.5.1.1 Applicable SANS standards

C3.6 The provisions of these COLTO specification take precedent over the provisions of any part of SANS 2001 that is applicable to the contract. The variations and additions to these specifications are described in the section "Applicable COLTO Specifications.

C3.7 The COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (1998) applicable to this contract are stated in Section C3.4: Construction.

C3.7.1.1 Particular / Generic specifications

The following particular and generic specifications are applicable to this contract:

- i) Environmental Management Plan
- ii) Occupational Health and Safety Specifications

C3.7.1.2 Planning and programming

It is a prerequisite of this contract that minimal disruption of the public is ensured during construction. Construction methods must be of such a nature that no property or life is endangered. The Employer accepts no responsibility for any work done outside the site boundaries without the Engineer's approval.

The Contractor shall draw up his programme to ensure that no delays are experienced on contract.

The Contractor himself is responsible for liaison and arrangements with the Engineer in connection with the finalisation and approval of the construction programme.

The Contractor shall submit his programme of work to the Engineer not later than fourteen (14) days after the Contractor has been notified of the acceptance of his Tender and only after discussions with the Engineer. If necessary, the Engineer may instruct the Contractor to adjust his programme to suit other activities.

The programme shall be in the form of a bar chart only, and shall clearly show the anticipated quantities, the production rates and value of work to be performed each month.

A network-based programme according to the precedence method shall also be provided showing the various activities and critical path in such detail as may be required by the Engineer. The programme shall be updated monthly in accordance with the progress made by the Contractor.

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.

The compilation of the construction programme and any amendments thereto during the course of construction shall be at the cost of the Contractor and shall not be measured elsewhere in the contract.

C3.7.1.3 Methods and procedures

C3.7.1.3.1 Maintenance of accesses and streets

The operation of construction vehicles on existing roads or streets, or on streets which have been completed to the level of sub-base or base or bituminous surface treatment, shall be limited to traffic with an axle load not exceeding that allowed by the Road Traffic Ordinance of the authority concerned, or any amendment thereof. Hauling is strictly forbidden on sections of streets that have been completed as described above. The Contractor shall make use of temporary haul roads, or where not practically possible, programme his work in such a manner that the haulage of materials shall be restricted to that required for the particular section of street. No additional payment shall be made for the use of temporary haul roads and all relevant costs shall be deemed to be covered by the appropriate rates.

The Contractor must note that no additional payment will be made for the construction of temporary access roads to the construction site, borrow areas or to the spoil sites, except for payment made under payment item A 8.3.2.2 of SANS 1200 A.

If the Contractor does make use of existing streets for the hauling of materials to or from the site, he shall be held responsible to clear any spillage caused by his activities on or near the roads by whatever means necessary, within one (1) day after such spillage has occurred. No additional payment will be made for the clearance of spillage and all relevant costs will be deemed to be covered under the relevant items.

C3.7.1.3.2 Blasting operation

Any blasting required shall be carried out by a competent, registered blaster. All permits required to purchase, transport, use and dispose of unused, blasting material shall be obtained and copies given to the Engineer before any blasting may take place. The commander of the local South African Police Services (SAPS) shall be informed of the time and date that blasting operations will take place at least 6 hours before blasting.

No blasting operations may take place on weekends or holidays or after 17:00 on week days.

The Contractor shall ensure that sufficient suitable cover material, to the satisfaction of the blaster, is available and in place before a blast is initiated.

C3.7.1.3.3 Normal working hours

Normal working hours shall be between 07:00 and 17:00 on weekdays from Mondays to Fridays and between 07:00 and 13:00 on Saturdays, should the Contractor choose to work on Saturdays, excluding Public holidays.

C3.7.1.3.4 Interference with Municipal staff and operations

Any member of the Contractors staff found to be interfering with municipal staff or operations in any way shall be removed from the site and shall not be allowed to return.

C3.7.1.3.5 Access for other Contractors

The Contractor shall provide reasonable access to other Contractors carrying out work on the site from time to time, as and when such access is required. The Contractor is entitled to request reasonable notification of at least 24 hrs before access by others is required.

C3.7.1.3.6 Giving notice of work to be covered up

The Contractor shall give the Engineer reasonable time to accommodate examinations in his program, in which case times for inspections can be agreed on. Requests for examination of work shall be made in the site request book, and via email or sms to the Engineer, at least 72 hrs before the examination is required.

If the Engineer attends with the purpose of examining any part or materials of the works at the time and date as agreed upon with the Contractor, and it is found that the works or materials are not yet ready for inspection, the Contractor shall be responsible for the costs of such a visit by the Engineer.

C3.7.1.3.7 Cost of test specimens and tests

It is deemed that the Contractor has made provision in his tender for all such services and tests that are required from him. It is the duty of the Contractor to, at his own cost and by means of the necessary tests, prove to the Engineer that the works and compaction where prescribed, comply with the specification.

C3.7.1.4 Sequence of the works

Sequencing of the works shall be agreed to between the Contractor, the Engineer and the relevant Municipal or service provider representatives

C3.7.1.5 Quality plans and control (Testing)

Refer SANS 1200 A: General and COLTTO

C3.7.1.6 Environmental Management Plan

In addition to the items listed here, the EMP shall also be considered to be part of the contractual documentation, and the requirements therein shall be adhered to.

C3.7.1.6.1 Demarcation of the site

For the purpose of the EMP, the site shall be divided into two areas identified by the Engineer and the Contractor:

- (i) The construction camp comprising all buildings, hostels, offices, lay down yards, vehicle wash areas, fuel and material storage areas, batching areas and other infrastructure that is required for the running of the job.
- (ii) The working area in which construction activity is permitted to take place. No infrastructure, permanent lay down or storage areas shall be established in this working area unless specified in the project specification or prior approval is obtained from the Engineer.

C3.7.1.6.2 Construction camp

The Contractor shall provide the Engineer with a plan showing the positions of all buildings, yards, vehicle wash areas, batching areas and other infrastructure for approval by the Engineer at least ten (10) days prior to the commencement date. The construction camp shall be planned in such a way so as to affect as small an area as practically possible. The

Engineer shall approve the location and layout of the construction camp prior to establishment.

C3.7.1.6.3 Fencing of the site

If a temporary fence is required, the Contractor shall erect and maintain such a fence (demarcating the boundary of the working area, construction camp and access roads) to the satisfaction of the Engineer. The erection of this fence shall be one of the first tasks undertaken by the Contractor after the commencement date. The boundaries between the construction camp area and the working area within the site shall also be fenced. The Contractor shall ensure that the erection of the fencing causes minimal disturbance to flora, fauna, natural, historical and cultural features. A method statement shall be submitted to the Engineer prior to erection to ensure proper positioning of the fence.

All material left over from fencing operations shall be collected after the fence has been erected and removed from site. Fences shall not be moved or removed without the written consent of the Engineer. The Contractor throughout the construction period shall maintain fences.

C3.7.1.6.4 Workshops

Any workshops shall be located inside the demarcated construction camp area. The exact location and design of the workshop shall be as approved by the Engineer prior to establishment. The workshop shall have a smooth impermeable (concrete) floor. The floor shall be banded and sloped towards an oil trap or sump to contain any spillages of substances (e.g. oil). When servicing equipment, drip trays shall be used to collect the waste oil and other lubricants. All waste material shall be disposed of in accordance with national, regional and local laws, regulations and by-laws. This waste material shall be regularly removed off site and disposed of at an approved waste site.

C3.7.1.6.5 Eating areas

The Contractor's employees shall eat in the designated eating area indicated on the Contractor's drawing of the construction camp that has been approved by the Engineer. No changes to the eating area shall be made without the approval of the Engineer. The Contractor shall provide shade and adequate scavenger-proof and weatherproof refuse bins in this area. Any cooking on site shall only be undertaken in the eating area and be done on well maintained gas cookers with fire extinguishers present. No cooking shall be done anywhere else on site and no fires are permitted.

C3.7.1.6.6 Watchmen

The Contractor shall ensure that a watchman is present on site during all non-working hours, including public holidays unless otherwise agreed with the Engineer to ensure the safety of sensitive areas.

C3.7.1.6.7 Ablution facilities

The exact location of the toilets shall be as approved by the Engineer. The Contractor shall provide toilets and shall be responsible for their maintenance and servicing on a daily basis. The contractor shall ensure that no spillage occurs when the toilets are cleaned or emptied. Burial of waste from toilets on site is strictly prohibited. The toilets shall be maintained in a clean state. Performing ablutions anywhere other than in toilets is strictly prohibited. Leaking toilets shall be repaired immediately or removed from site.

C3.7.1.6.8 Solid waste collection areas

“Solid waste” refers to all solid waste, including construction debris, chemical waste, excess cement/concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

The Contractor shall set up a waste control and removal system. The Contractor shall submit a method statement for waste control and removal to the Engineer for approval prior to commencement. Bins shall be closed, weatherproof and scavenger-proof.

Waste shall be collected from these bins on a daily basis and shall be stored in a central collection area prior to removal off-site. This central collection area shall have appropriate storage containers (closed and weatherproof) banded and lined with plastic or concrete. The waste from this central collection area shall be disposed of off-site at an approved waste site. Waste shall be removed from site on a regular basis as approved by the Engineer. Waste shall not be burnt or buried on site or in the surrounding area. Where possible, appropriate material shall be reused or recycled.

C3.7.1.6.9 Wastewater

Water shall be used sparingly on site and where possible wastewater shall be recycled. A wastewater management plan shall be submitted to the Engineer for approval 10 days prior to commencement date. This management plan shall detail the expected extent of contamination of each wastewater stream and how the Contractor plans to deal with each wastewater stream.

C3.7.1.6.10 Fuel storage areas

Fuels required for use during construction shall be stored in a depot at the construction camp at a location as agreed upon by the Engineer. The Contractor shall ensure that all liquid fuels (petrol and diesel) are stored in tanks with lids, which are kept firmly shut. The tanks shall be situated on a smooth impermeable (plastic or concrete) base with an earth bund. The impermeable lining shall extend to the crest of the bund and the volume inside the bund shall be 1.5 x the total capacity of the storage tanks. The banded area shall be emptied of water following rainfall events. The floor of the bund shall be sloped towards an oil trap or sump to enable any spilled fuel and / or fuel-soaked water to be removed.

The Contractor shall keep fuel under lock and key at all times.

C3.7.1.6.11 Concrete batching area

Cement and concrete are regarded as hazardous to the environment due to the high pH of the material and the chemicals it contains.

The Contractor shall submit a method statement for mixing of concrete for approval by the Engineer indicating where the mixing will take place and the methods to ensure that waste water and materials are contained in the batching area and disposed of correctly. Concrete shall not be mixed directly on the ground.

C3.7.1.6.12 Equipment maintenance and storage

All vehicles and equipment shall be kept in good working order and serviced regularly. Leaking equipment shall be repaired immediately or removed from the site. Where possible, all maintenance of equipment and vehicles shall be performed in the workshop. If it is necessary to do maintenance outside of the workshop area, the Contractor shall obtain agreement from the Engineer prior to commencing activities.

The Contractor shall demarcate an area in which equipment and vehicles may be stored. The location of this area shall be as approved by the Engineer. The Contractor shall take measures to ensure that there is no pollution of this storage area by leaks or drips.

C3.7.1.6.13 Materials handling, use and storage

The Contractor is responsible for ensuring that any material delivery drivers are informed of all procedures and restrictions (e.g. which access roads to use, "no go" areas, speed limits, dust control, etc) required to comply with the EMP before they arrive at site and off load any materials. The Contractor shall ensure that the delivery drivers are supervised during off-loading by someone with an adequate understanding of the requirements of the EMP, so as to ensure that all relevant requirements of the EMP are followed.

Hazardous Substances

The Contractor shall comply with all relevant national, regional and local legislation with regard to the transport, use and disposal of hazardous materials.

The Contractor shall provide the Engineer with a list of all hazardous materials to be used on site, together with the storage, handling and disposal procedures of the materials. This information shall be available to all personnel on site.

The location of the hazardous material store shall be within the demarcated construction camp area. The location and design of the store within this area shall be approved by the Engineer prior to establishment.

Fuel (Petrol and Diesel) and Oil

Where possible, the Contractor shall ensure the refuelling of vehicles takes place only at the fuel storage area in the construction camp. Where this is not possible, the Contractor shall notify the Engineer to get his approval of the refuelling method to be used. The surface under the refuelling area shall be protected against pollution to the satisfaction of the Engineer prior to any refuelling activities. All equipment that leaks shall be repaired immediately or removed from the site. Refuelling shall be carried out by means of pumps, rather than funnels.

C3.7.1.6.14 Emergency procedures

The Contractor shall ensure that emergency procedures for the following situations are submitted for approval to the Engineer prior to establishment of the site.

Fire

The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it. The Contractor shall ensure that his staff and the staff of Subcontractors are aware of the procedure to be followed in the event of a fire.

Accidental leaks and spillages

The Contractor shall ensure that his staff and the staff of Subcontractors are aware of the procedure to be followed for dealing with spills and leaks, which will include notifying the Engineer and relevant authorities. The Contractor shall also ensure that the necessary materials and equipment for dealing with spills and leaks are present on site at all times. The clean-up of spills and any damage caused by the spill or leak shall be for the Contractor's account. The Contractor shall submit a method statement for management of accidental leaks and spillages of any liquid material to the Engineer for approval.

C3.7.1.6.15 Care of surrounding areas

The Contractor shall ensure that no contamination of or damage to the surrounding areas or watercourses shall occur as a result of any of his activities during construction.

Care shall be taken to ensure no accidental spillage or leakage occurs whilst temporary bypass facilities are in use. Should any spillage or leakage occur the Contractor shall immediately stop his operations and clean up the spillage. He shall then rectify the cause of the spillage or leakage before proceeding further to ensure that no further spillages occur.

The clean-up of spillage and any damage caused by the spillage or leakage shall be for the Contractor's account. The Contractor shall submit a method statement for management of accidental leaks and spillages of any sewage to the Engineer for approval.

The Contractor shall ensure that no pollution of the surrounding areas occurs due to wind-blown or other litter emanating from the site or from his activities during construction. No fires are permitted, neither is the cutting down of or any damage to trees and other vegetation (especially Camel Thorn Trees) outside of the demarcated site.

C3.7.1.7 Format of communications

All communication regarding the contract shall be channelled through the Engineer and/or his duly authorised representative.

The General Conditions of Contract (GCC) for Construction Works (1st edition) 2015 clauses 1.1.24 and 1.2 shall prevail in terms of format of communications.

C3.7.1.8 Key personnel

The contractor shall furnish satisfactory evidence that they dispose of sufficient staff and workmen with the necessary experience in work of a similar nature as that described in this document. For this purpose, the contractor shall duly complete Schedule 1E: Personnel and Schedule 1G: Past Experience.

C3.7.1.9 Management meeting

Monthly site meetings will take place at the site office of the Contractor at dates and time to be communicated at the award of the contract. The Employer, Engineer, Contractor and Project Steering Committee will attend the monthly site meetings. The Engineer will act as the chair for the monthly site meetings. Other planning meetings between the Contractor's personnel and the Engineer's Representative can take place on a fortnightly basis or as required in terms of the contract progress.

C3.7.1.10 Daily records

The Contractor will be required to keep a daily record of the site activities (including plant, personnel, site and weather conditions) in the Site Diary which will be inspected during each management meeting and when the Engineer or Employer visits the site.

C3.7.1.11 Bonds and guarantees

The Bond required on the project is the Form of Guarantee as described in the GCC 2015 Clause 7 and Pro Forma appended in the GCC 2015 on pages 57-58. The liability of the Guarantee shall be for 10% of the Tender Sum.

C3.7.1.12 Payment certificates

Payment on this contract will be made in accordance with Clause 49 of the General Conditions of Contract of 2015. The Contractor and the Engineer's Representative shall compile and

agree on the quantity of work certified for payment and submit the payment certificate to the Engineer 3 days before the monthly site meeting. The Engineer will draw up the payment certificate to be certified at the monthly site meeting by the Engineer and the Employer. Payment certificates will only be certified at the site meeting if the Engineer and Employer are in agreement as to work certified, contractual obligations fulfilled by the contractor, etc. following a site inspection on the day of the site meeting. Payment certificates will be certified by the Engineer and Employer should there be an agreement as to the issues previously mentioned or the payment certificate will be edited. All certified payment certificates will be dealt with as stipulated in clause 49.4: Employer's obligation to pay of the GCC 2004.

No retention money will be certified for payment unless the list setting out the work to be completed to justify the issue of the Certificate of Completion has been fully complied with.

The quantities in the Bill of Quantities are provisional only and do not necessarily represent the actual and final amount of work to be done. Unless otherwise stated, items will be measured net in accordance with the drawings and no allowance will be made for waste.

The Contract amount for the complete contract shall be computed from the actual measured quantities of authorised work done to the satisfaction of the Engineer, valued at prices tendered against the respective items in the Bill of Quantities.

C3.7.2 OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS

C3.7.2.1 Background

In terms of the Construction Regulations [Regulation 4 (1) (a)] of the Occupational Health and Safety Act, No 85 of 1993, the Employer is required to compile an Occupational Health and Safety specification for each of its projects and the Principle Contractor, appointed by the Employer in terms of Regulation 4 (1) (c), is required to prepare an Occupational Health and Safety plan. This plan has to be prepared in terms of Regulation 5 (1) as well as the Employer's Occupational Health & Safety specification. In terms of Regulation 4 (2), the Employer and the Principle Contractor are required to agree on the Occupational Health and Safety Plan before any work may commence.

C3.7.2.2 Framework for an occupational health and safety plan

C3.7.2.2.1 Introduction

The Principal Contractor has to demonstrate to the Employer that it has a suitable and sufficiently documented Occupational Health and Safety plan as well as the necessary competencies, experience and resources to perform the construction work safely.

The Principle Contractor could be required to submit the following documentation for perusal and verification by the Employer:

- Management structure.
- Quality plan.
- Human resources plan.
- Registered workplace skills plan.
- "Letter of good standing" from the Compensation Commissioner or licensed compensation insurer.
- Proof of Induction and other training of employees.
- Example copy minutes of previous Occupational Health and Safety Committee meetings and copies of Incident Investigation reports.

The following specifications are supplied as a guide only. The Employer's Health and Safety Agent may amend and/or expand on the specifications by means of an addendum to Tender or after the award of the Contract.

C3.7.2.2.2 OH&S plan at tender stage

Tenderers shall submit an OH&S plan with their tender document. This shall be a preliminary plan that may be expanded on and finalised after the award of the contract. The OH&S Plan should be based on the following principles:

- A proper risk assessment of the construction work.
- Pro-active identification of potential hazards and unsafe working conditions.
- Informing and/or training of employees in hazards and risk areas.
- Provision of a safe-working environment and safety equipment.
- Ensuring the safety of sub-contractors through their safety plans.
- Monitoring the health and safety on the construction works on a regular basis.
- Using competent safety officers.

C3.7.2.3 Contents of an occupational health and safety plan

C3.7.2.3.1 Occupational Health and Safety Management Programme

- Management of Occupational Health and Safety risks.
- Occupational Health and Safety structures and appointments.
- Programme of Occupational Health and Safety inspections.
- Occupational Health and Safety Representatives.
- Occupational Health and Safety committee.

C3.7.2.3.2 Communication and management of the work

- Management structure and responsibilities.
- Details of the construction supervision and his appointed assistants.
- Details of the Construction Safety Officer.
- Occupational Health and Safety goals for the project and arrangements for monitoring and review of Occupational Health and Safety performance.
- Arrangements for:
 - Regular liaison between parties on site.
 - Consultation with the workforce.
 - The exchange of design information between the Employer, designers, supervisors and contractors on site.
 - Handling design changes during the project.
 - Selection and control of contractors.
 - The exchange of Occupational Health and Safety information between all contractors.

- Security.
- Site induction and onsite training.
- Facilities and first-aid.
- The reporting and investigation of accidents and incidents.
- The production and approval of risk assessments and method statements.
- Site OH&S rules.
- Fire and emergency procedures.
- Reporting to the Employer i.e. results of Occupational Health and Safety inspections, incident and incident investigations and committee meetings.
- Reporting of incidents to the Department of Labour and Compensation Insurer where appropriate.

C3.7.2.3.3 Arrangements for controlling significant site risks

The following are some examples of the arrangements for controlling the most significant site risks:

C3.7.2.3.4 Safety risks

- Services, including temporary electrical installations.
- Preventing employees from falling into excavations, from trucks etc.
- Work with, on or near fragile materials.
- Control of lifting operations.
- The maintenance of plant and equipment.
- Traffic routes and segregation of vehicles and pedestrians.
- Traffic control during pipeline crossing of existing roads.
- Handling and storage of hazardous materials.
- Dealing with existing unstable structures/land.
- Working in confined spaces.
- Working at elevated heights (> 3,0 m).
- Other significant safety risks as and when identified.
- Working in excavations to a depth of 7,0 metres.

C3.7.2.3.5 Health risks

- Working environment.
- Handling, storage and use of hazardous chemical substances.

- Dust containing cement, silica and other hazardous substances.
- Dealing with contaminated land or material.
- Manual handling.
- Reducing noise and vibration.
- Provision of adequate lighting.
- Ventilation considerations.
- Extreme heat and cold temperature considerations.
- Dealing with HIV/Aids and other illnesses.
- Provision of and maintaining ablution and eating facilities.
- Other significant health risks as and when identified.

C3.7.2.4 Special risks

Contractors are to take note of the special risks that may be encountered during the project and to include these special risks in the OH&S plan.

C3.7.2.4.1 Working environment

- Trench excavations and bulk earthworks ranging between 1 and 1.5 metres in depth.
- Rotating machinery (and pumps if required).
- Electrical infrastructure not indicated on “As Built” drawings.
- Electrical storms during summer months.
- Traffic control during pipeline crossings of existing roads.

C3.7.2.4.2 Installation work

- Use of electricity may be hazardous in wet conditions.
- Working space may be limited.
- Lifting and placing of heavy equipment, pipes and manhole rings and covers.

C3.7.2.5 Preparation of an occupational health and safety operational reference file/manual

The Principal Contractor shall open and maintain an OH&S file for the duration of the contract. On completion of the contract the Principal Contractor shall hand the OH&S file to the Employer.

C3.7.2.5.1 The following are some of the requirements to be addressed

- Layout, format and content requirements.
- Arrangement for the collection and gathering of information.
- Storage and archiving of all the information.
- Copy to the Client at completion of project.
- Appointment of a health and safety officer in writing.

C3.7.2.5.2 Contents of an OH&S file/manual

- OH&S Policy.
- Notice of new project.
- Site start-up.
- Security measures.
- Written designations and appointments.
- Arrangements with contractors/mandatories.
- OH&S rules and procedures.
- Induction.
- OH&S training.
- OH&S promotion.
- OH&S representatives.
- OH&S committees.
- Workplace facilities e.g. ablutions, sheltered eating areas etc.
- Protective equipment.
- Workplace inspections and audits.
- Investigation and reporting of incidents/accidents.
- Mechanical safeguarding.
- Electrical safeguarding.
- Safeguarding against trench excavations with depths ranging between 2 to 7 metres.
- Safeguarding against hazardous substances.
- Lifting machinery and equipment.
- Construction vehicles and mobile plant.
- Welding, heating and flame cutting.
- Protection of the environment affected by construction activities.
- Keeping of records in terms of the OH&S Act (85 of 1993).
- General details of construction methods and materials used.
- Details of equipment and maintenance facilities within the structures.
- Maintenance requirements and procedures for structures / equipment / plant.

- Manuals produced by suppliers and specialist contractors, including operating and maintenance procedures and schedules for plant and equipment.
- Details of the location and nature of utilities and services, including emergency and fire-fighting systems.

C3.7.2.6 Notice of construction work

The Contractor shall complete Annexure A – Notification of Construction Work of Regulation 3 of the Construction Regulations 2003.

The original shall be forwarded to the office of the Department of Labour closest to the site. A copy of the original must be kept on site at all times.

C3.7.2.6.1 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 surrounding the site is populated, 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.

C3.7.3 SAFETY ON SITE

C3.7.3.1 Access to site by public

The Contractor shall erect fences and employ sufficient security personnel to prevent unauthorised access to the site by members of the public. Notices prohibiting access to the site shall be clearly displayed at all access points.

The notices shall be in English, Zulu and the most commonly used local language.

C3.7.3.2 Barricades and lighting

All excavations and openings in walls and slabs into or through which a person may fall shall be securely barricaded at all times in accordance with the requirements of the applicable OH&S regulations.

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PART C4 : SITE INFORMATION

C4.1 Locality Plan

WARD 3



Road Name	Start Coordinates	End Coordinates
Saligna Avenue	29° 47.582'S / 29° 29.605'E	29° 47.425'S / 29° 29.601'E
Polo Way	29° 47.421'S / 29° 29.737'E	29° 47.458'S / 29° 29.431'E

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PART C5 : ANNEXURES

Annexure A Drawings

Annexure B Environmental Management Programme

PART C5 ANNEXURE A

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 are issued separately.

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.

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.

Tender drawings are issued separately and are listed hereunder:

CIVIL DRAWINGS	
Drawing Number	Drawing Description
UA1214-01-001-LYT-T-00	General Road Layout Plan
UA1214-01-002-LYT-T-00	General Road Layout Plan: km 0+000 to km 0+120
UA1214-01-003-LYT-T-00	General Road Layout Plan: km 0+120 to km 0+240
UA1214-01-004-LYT-T-00	General Road Layout Plan: km 0+240 to km 0+292
UA1214-01-005-LS-T-00	Long Section
UA1214-01-006-CS-T-00	Cross Sections
UA1214-01-007-DET-T-00	Standard Details

PART C5 ANNEXURE B
ENVIRONMENTAL MANAGEMENT PLAN

The flowing documents are to be forwarded to successful Contractor