THE SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LIMITED

SUBCONTRACT NO. RAUBEX-CPG-3CE-N.002-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1 PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

SUBCONTRACT DOCUMENT

BASE DATE: AUGUST 2021

TENDER DOCUMENT
VOLUME 3

RAUBEX KZN
Procurement Manager
10 Westgate Pl,
Tollgate,
Pinetown,
3610

NAME OF TENDERER: .....

Set sequential number

SUBCONTRACT NO. RAUBEX-CPG-3CE-N.002-212-2018/1 WP 1-2

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SUBCONTRACT DOCUMENT

THIS DOCUMENT COMPILED BY:

C and PM Consulting (Pty) Ltd
PO Box 2074
Hillcrest
3650

Tel: (082) – 878 9835
Fax: N/A
Email:stephen@cpmc.co.za

UNDER THE DIRECTION OF:

The Regional Manager
Eastern Region
The South African National Roads Agency SOC Ltd
58 van Eck Place ,
Mkondeni, Pietermaritzburg,
KwaZulu-Natal,
3200,
South Africa

Tel: (033) 392 8163

LIST OF CONTRACT DOCUMENTS

The following documents form part of this contract:

VOLUME 1: The Conditions of Subcontract for Construction for Building and Engineering Works Designed by the Employer First Edition (2011), published by the International Federation of Consulting Engineers (FIDIC).

VOLUME 2: The COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (1998 edition), issued by the Committee of Land Transport Officials which the tenderer shall purchase himself. (See Note to Tenderer 2 below).

VOLUME 3: Project Document.

Notes to Tenderer:

1. **Volume 1 is obtainable from CESA**
   P. O. Box 68482, Bryanston, 2021.
   Tel: (011) 463 2022 Fax: (011) 463 7383 Email: general@cesa.co.za

2. **Volume 2 is obtainable from SAICE, Private Bag X200, Halfway House, 1685. Tel: (011) 8055947/8, e-mail: civilinfo@saice.org.za or can be purchased from the Employer.**

3. **Volume 3 is this document issued at tender stage downloaded from www.c-pmc.co.za or requested via e-mail to: helpdesk.murchison@cpmc.co.za.**

   The standard conditions of tender (SANS 10845-3) is obtainable from the South African Bureau of Standards
   Private Bag X191, Pretoria, 0001
   Tel: (012) 428 7911 Fax: (012) 344 1568 Website: www.sabs.co.za

   At contract stage Volume 3 will be a bound signed paper copy containing the following documents:
   - **Returnable schedules relevant to the project**
   - **Agreements and Contract Data**
   - **Pricing Data**
   - **Scope of Work**
   - **Site Information**

4. **SUBMISSION OF TENDER – Of the contract documents, only the following elements of Volume 3 needs to be submitted:**

   Submitted electronically by e-mail, to helpdesk.murchison@cpmc.co.za in the following order:
   a) Form of Offer (signed and scanned as pdf)
   b) All returnable schedules and attachments (signed and scanned as pdf)
   c) Completed Pricing Schedule (scanned copy in pdf)
   d) Completed Pricing Schedule in excel

Information provided by a tenderer over and above the above elements of Volume 3 shall be treated as information only and will only be bound into the contract document if the information has a bearing on the tender price and/or project specifications.

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PART T1: TENDERING PROCEDURES

PART T1 TENDERING PROCEDURES

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RAUBEX KZN (PTY) LTD

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

T1.1 TENDER NOTICE AND INVITATION TO TENDER (Incorporating SBD1)

RAUBEX KZN (PTY) LTD

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

T1.1 TENDER NOTICE AND INVITATION TO TENDER (SBD1)

RAUBEX KZN (PTY) LTD invites tenders from experienced EME/QSE subcontractors for the Construction of Work Packages 1 through 2 as detailed below along National Route 2 Sections 21 and 22 From Izingolweni to Murchison KM 101.1(N2/21) to KM 18.4 (N2/22) endorsed by The South African National Roads Agency SOC Limited (SANRAL). This project is situated in the province of Kwazulu-Natal, in the District Municipality of Ugu (DC21) and the Ray Nkonyeni Local Municipality. The approximate duration is three (3) months per work package.

The approximate duration is **3** months per work package detailed below.

Only tenderers who comply with the definition of a Targeted Enterprise under clause 4.1.1 and are at least 51% Black owned and who is an EME or QSE or cooperative, are eligible to tender.

Only tenderers who meet the minimum functionality score as stated in clause 5.11.1 will be evaluated further on price and preference.

It is estimated that tenderers should have a CIDB contractor grading designation as indicated in the table below:

Works Package	**CIDB requirement**
RAUBEX-CPG-3CE-212-2018/1 WP 1 - ASPHALT BASE AND SURFACING	3 CE
RAUBEX-CPG-3CE-212-2018/1 WP 2 - ASPHALT BASE AND SURFACING	3 CE

Tenders from tenderers registered as potentially emerging enterprises but with a CIDB contractor grading designation lower than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25(7A) of the Construction Industry Development Regulations, will not be accepted.

Preferences are offered to tenderers who comply with the criteria stated in the Tender Data.

SUBCONTRACT TENDER DOCUMENTS

Tender documents are available for downloaded at www.c-pmc.co.za. Tenderers must have access to MS Office ©2013 and Acrobat Adobe ©9.0, or similar compatible software.

There will be no physical collection of tender documents, documents may be downloaded from https://c-pmc.co.za/welcome or requested via e-mail from helpdesk.murchison@cpmc.co.za from 29 October 2021

TENDERERS' BRIEFING AND TRAINING

A tender clarification briefing will be held at the Raubex KZN (Pty) Ltd Stockpile Area situated in Paddock on Tuesday 02 November 2021 starting at 10:00 am. A time slot will be notified via WhatsApp, due to COVID -19 regulations should too many applications be received.

TENDERERS ARE REQUIRED TO BOOK FOR THE MEETING AS FOLLOWS:

WhatsApp on **063 772 9369** or E-mail helpdesk.murchison@cpmc.co.za

THE FOLLOWING MUST BE INCLUDED IN THE WHATSAPP OR E-MAIL BY NO LATER THAN 12:00 on 01 November 2021:
Company Name:
e-mail Address:
Mobile Number:
Work Package Number:
Name of Authorised Representative to be present at the meeting:
Once registered, a location pin will be forwarded as well as the time slot allocated for the individual tenderer.

COMPLETION AND DELIVERY OF TENDERS

The closing time for receipt of tenders is 14h00 on 09 November 2021. All tenders to be submitted electronically. Queries relating to issues arising from these documents may be addressed to the following:

Bidding procedure enquiries	**Technical enquiries**
Contact person : Mr. Kaolin Naidoo	Contact person : Mr. Charles Durham
Tel No: 071 676 5773	Tel No: 073 592 0872
Fax No: N/A	Fax No: N/A
E-mail: helpdesk.murchison@cpmc.co.za	E-mail: charles.d@cpmc.co.za

RAUBEX KZN (PTY) LTD

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

T1.2 TENDER DATA

T1.2 TENDER DATA

The conditions of tender are the standard conditions of tender as contained in SANS 10845-3:2015 Edition 1.

The standard conditions of tender make several references to the tender data for details that apply specifically to this tender. The tender data shall have precedence in the interpretation of any ambiguity or inconsistency between the tender data and the standard conditions of tender.

Each item of data given below is cross-referenced to the clause in the standard conditions of tender to which it mainly applies.

Clause Number	Data
2.1	Wherever reference is made in the documentation to bill of quantities it shall also mean pricing schedule.
3.1	The Contractor is ***RAUBEX KZN (PTY) LTD (Pty) Ltd*** The Contractor's *domicilium citandi et executandi* (permanent physical business address) is: 12 Sterkspruit Road, Cliffdale, Outer West Durban 3700 The Contractor's address for communication relating to this contract is: 12 Sterkspruit Road, Cliffdale, Outer West Durban 3700 **Where in the standard conditions of tender (SANS 10845-3:2015) reference is made to "the Employer", it shall mean "the Contractor" as defined above.** **Main Contract Details**: Contract Number: SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2 Employer: The South African National Roads Agency SOC Limited Engineer: Bosch Ulwazi (Pty) Ltd The Contractor: RAUBEX KZN (PTY) LTD The Conditions of Contract for the Main contract is: "Conditions of Contract for Building and Engineering Works designed by the Employer" (1999) published by the International Federation of Consulting Engineers (FIDIC) (Red book).

3.2	The tender documents issued by the Contractor comprise: **Part T1: Tendering Procedures** • T1.1 Tender Notice and Invitation to tender • T1.2 Tender data **Part T2: Returnable documents** • T2.1 List of returnable documents • T2.2 Returnable schedules **Part C1: Agreements and contract data** • C1.1 Form of Offer and Acceptance • C1.2 Contract data **Part C2: Pricing data** • C2.1 Pricing instructions (assumptions) • C2.2 Pricing Schedules/Bill of quantities **Part C3: Scope of work** **Part C4: Site information** **Part C5: Annexures**
3.4	The language for communications is English. The Contractor's contact details is: ***RAUBEX KZN (PTY) LTD (Pty) Ltd*** ***12 Sterkspruit Road,*** ***Cliffdale,*** ***Outer West*** ***Durban*** ***3700*** Tel: +27 31 700 6411 Fax: +27 31 700 5618 e-mail: helpdesk.murchison@cpmc.co.za
3.5	The tender process may be cancelled if: a) Due to changed circumstances, there is no longer a need for the goods or services specified in the invitation; b) Funds are no longer available to cover the total envisaged expenditure; c) No acceptable tender is received; or d) There is a material irregularity in the tender process The period of six months shall not apply.
4.1.1	Only those tenderers who satisfy the following criteria are eligible to submit tenders. If the tenderer fails to meet any of the eligibility criteria, he will be given 5 calendar days to become compliant. If the tenderer fails to submit the requested information in the required timeframe, his tender shall be deemed non-compliant. (a) CIDB registration (Form A10) Registered with the CIDB, at close of tender, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25(7A) of the Construction Industry Development Regulations, for a CE class of construction work. Tenderers whose CIDB registration expires within the tender validity period, need to demonstrate that there is a reasonable chance of being registered in the appropriate grading designation during the tender evaluation period, by submitting a copy of their timely application for CIDB registration, with their tender submission. Tenders received from such tenderers who are not capable of being registered in the required contractor designation, within 21 working days after either expiry of their registration or after being requested to provide proof of registration, will be considered non-responsive. Note that in terms of the Construction Industry Development Board Act, 2000 (Act No. 38 of 2000) a registered contractor must apply for renewal of registration three months before the existing registration expires.

Tenderers registered as potentially emerging enterprises but with a CIDB contractor grading designation lower than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25(7A) of the Construction Industry Development Regulations, are not eligible to have their tenders evaluated.

Category of tender	Upper limits per CIDB Regulation 17 (effective 7 October 2019)	Contractor's allowable margins (Incl. VAT)
CE 1	R500 000	The Contractor will use its discretion in terms of CIDB Practice Note 3 on allowable margins to be accepted
CE 2	R1 000 000	
CE 3	R3 000 000	
CE 4	R6 000 000	
CE 5	R10 000 000	
CE 6	R20 000 000	
CE 7	R60 000 000	
CE 8	R200 000 000	

Joint Ventures are eligible to submit tenders provided that:

- every member of the joint venture is registered with the CIDB;
- the lead partner has a contractor grading designation of not lower than one level below the required grading designation in the class of construction works under consideration and possesses the required recognition status; and
- the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a CE class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations.

b) National Treasury Central Supplier Database

Tenderers, or in the event of a joint venture, each member of the joint venture, shall be registered on the National Treasury Central Supplier Database at the closing date for tender submissions. Tenders received from such tenderers who do not comply with this requirement, will be declared non-responsive.

c) Criteria for preferential procurement

Only tenderers who comply with the definition of a Targeted Enterprise which is:

a. an EME or QSE which is at least 51% owned by black people;
b. an EME or QSE which is at least 51% owned by black people who are youth;
c. an EME or QSE which is at least 51% owned by black people who are women;
d. an EME or QSE which is at least 51% owned by black people with disabilities;
e. an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships;
f. a cooperative which is at least 51% owned by black people;
g. an EME or QSE which is at least 51% owned by black people who are military veterans; or
h. more than one of the categories referred to in paragraphs a to g; and
i. which is tax and COID compliant

The tenderer shall submit a valid B-BBEE certificate as proof of eligibility.

d) Functionality Criteria

i) CIDB Grade 3 or Package Value R 3 000 000

	Location of Business	Points
Locality (Max 40 Points)	Tenderer is based in the preferred town.	40
	Tenderer is based in the preferred Local Municipality.	20
	Tenderer is based outside the Local Municipality, but in the District Municipality.	10
	Tenderer is based outside the District Municipality, but in the Province.	0
	Tenderer is based outside the Province, but in the RSA.	0

CIDB Grading (Max 20 Points)	**CIDB Grading Designation**		**Points**
	Tenderer is registered with the CIDB in a grading designation of 5 CE or higher.		0
	Tenderer is registered with the CIDB in a grading designation of 4 CE.		10
	Tenderer is registered with the CIDB in a grading designation of 3 CE.		20
	Tenderer is registered with the CIDB in a grading designation of 2 CE PE.		10
Experience (Max 10 Points)	**Experience**		**Points**
	18 months applicable experience.		10
	15 months applicable experience.		8
	12 months applicable experience.		6
	9 months applicable experience.		4
	6 months applicable experience.		2
	3 months applicable experience.		1
	Less than 3 months applicable experience.		0
Plant and Equipment (Max 10 Points)	**Plant and Equipment**		**Points**
	Item 1		2
	Item 2		2
	Item 3		2
	Item 4		2
	Item 5		2
Designated Groups (Max 20 Points)	**Designated Groups**		**Points**
	Tenderer is at least 51% owned by black people who are youth.		5
	Tenderer is at least 51% owned by black people who are women.		5
	Tenderer is at least 51% owned by black people with disabilities.		5
	Tenderer is at least 51% owned by black people who are military veterans.		5
	Or as agreed with the PLC.		
		Total Points	**100**

The Tenderer shall submit with his tender a signed letter from his ward councillor should he wish to claim the functionality points for his location as stated in i) above. This form shall be attached to (Form A12). Failure to comply with the requirements or to complete Form A12 may render the tender non-responsive.

4.6	Failure to apply instructions contained in addenda may render a tenderer's offer non-responsive in terms of condition of tender 5.8.
4.7	The arrangements for a clarification briefing and tender training session are: A tender clarification briefing presentation and training presentation are available to be downloaded via website at https://c-pmc.co.za/welcome. Prospective tenderers must send a request for a link to the clarification briefing and training documents to the following address helpdesk.murchison@cpmc.co.za . The onus rests with the tenderer to ensure that the representative reading / viewing the clarification briefing presentation is appropriately qualified to understand all directives and clarifications given in the presentation. The signature on the duly completed and signed Form A1 shall be considered proof that the tenderer read/viewed the whole clarification briefing presentation and clearly understood all directives and clarifications given in the presentation. A tenderer's representative cannot represent more than one tenderer at the clarification briefing.
4.9	Limited insurance will be provided by the Contractor.
4.10	Tenderers are required to state the rates and prices in Rand.

<table>
<tr><td>4.12</td><td>Alternative tender offers will not be considered.</td></tr>
<tr><td>4.13.1</td><td>Alternative offers will not be considered.

In the event of any discrepancy between the contents of the electronically priced schedule (if applicable), the print-out thereof and the electronically provided pricing schedule (if applicable) in pdf format, the contents of the provided pdf format shall be taken as the valid contents. For the information provided by the tenderer as part of his submission, e.g. rates, the signed print-out shall be taken as the valid submission.</td></tr>
<tr><td>4.13.4</td><td>Tenderers are required to submit all certificates as listed in the Schedule of Tender Compliance (Form D1).</td></tr>
<tr><td>4.13.5</td><td>Only the following needs to be submitted.

The following information to be submitted electronically by e-mail, in the following order:
a) Form of Offer (signed and scanned as pdf)
b) All returnable schedules and attachments (signed and scanned as pdf)
c) Completed Pricing Schedule (scanned copy in pdf)
d) Completed Pricing Schedule (electronically completed in Excel)

Prospective tenderers must submit the completed tender document under subject heading as follows: “Subcontract number & Tenderer name” to helpdesk.murchison@cpmc.co.za

The details to be shown on each tender offer package are:

<table><tr><td>TENDER CLOSING TIME: 14:00, 09 November 2021

FOR SUBCONTRACT RAUBEX-CPG-3CE-212-2018/1 WP 1-2</td></tr><tr><td>CONTRACTOR:
RAUBEX KZN (PTY) LTD
10 Westgate Pl,
Tollgate,
Pinetown,
3610
Contact Number: 081 470 5442</td></tr><tr><td>TENDERER:
Name:

Physical address:

Contact Numbers:</td></tr></table></td></tr>
<tr><td>4.14</td><td>Provided that the omission is not a material omission, the Contractor reserves the right to condone the omission and may waive any nonconformities in the tender.

Provided that the omission is not a material omission, the Contractor reserves the right to condone the omission and may request the tenderer to submit the necessary information or documentation within five (5) working days to rectify non-material non-conformities in the tender related to documentation requirements.</td></tr>
<tr><td>4.15</td><td>The closing time for submission of tender offers is 14:00 on 09 November 2021</td></tr>
<tr><td>4.16.1</td><td>The tender offer validity period is 12 weeks.</td></tr>
<tr><td>4.16.2</td><td>Where a tenderer, at any time after the opening of his tender offer but prior to entering into</td></tr>
</table>

	a contract based on his tender offer: a) withdraws his tender; b) gives notice of his inability to execute the contract in terms of his tender; or c) fails to comply with a request made in terms of 4.17, 4.18 or 5.9, such tenderer may be barred from tendering on any of the Contractor's future tenders for a period to be determined by the Contractor, but not less than six (6) months, from the date of tender closure. This sanction also applies to tenders under evaluation and not yet awarded. This sanction does not apply to tenders under evaluation where a request for extension of the validity period was not accepted by the tenderer. The Contractor may fully or partly exempt a tenderer from the provisions of this condition if he is of the opinion that the circumstances justify the exemption.
4.18	Any additional information requested under this clause must be provided within five (5) working days of date of request.
5.1	The Contractor shall respond to clarifications received up to seven (7) working days before tender closing time.
5.2	The Contractor shall issue addenda until five (5) working days before tender closing time.
5.4	The time and location for opening of the tender offers shall be: Time: 14:00 on 10 November 2021. Venue: Opening of the tender offer via live streaming. An Invitation with a link shall be sent to all tenderers that accessed the tender documentation.
5.7	Prior to disqualification, the Contractor shall inform the tenderer and give the tenderer an opportunity to make representations within 14 days as to why the tender submitted should not be disqualified and as to why the tenderer should not be restricted by the National Treasury from conducting any business with any organ of state for a period not exceeding 10 years. In the event of disqualification, the Contractor may, at its sole discretion, claim damages from the tenderer and impose a specified period during which tender offers will not be accepted from the offending tenderer and, the Contractor shall inform SANRAL who in turn will communicate with National Treasury and the CIDB in writing.
5.8	A substantially responsive tender is a tender in which all of the material information and documentation submitted at close of tender contains non-material and non-conformities to the bid specifications but are not related to price. The correction of any such documentation or information, or the condonement for the non-inclusion of any such document or information may not be prejudicial towards the offer and claimed preference of any responsive tender or be construed to be giving an unfair advantage to any tender. A responsive tender is also one that conforms to all the terms, conditions, and scope of work of the tender documents, without material omissions. The test for a material omission is the same as the test for a material deviation or qualification.
5.9	Arithmetical errors, omissions, discrepancies and imbalanced unit rates Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount appearing in the summary to the bill of quantities shall govern. Check responsive tender offers for: a) the gross misplacement of the decimal point in any unit rate; b) omissions made in completing the pricing schedule or bills of quantities; or c) arithmetic errors in: i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or ii) the summation of the prices. d) imbalanced unit rates. Notify shortlisted tenderers of all errors, omissions or imbalanced rates that are identified

	in their tender offers. Where the tenderer elects to confirm the errors, omissions or re-balancing of imbalanced rates the tender offer shall be corrected as follows: a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the unit rate shall govern, and the line item total shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted and the unit rate shall be corrected. b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall be corrected. c) Where the unit rates are imbalanced adjust such rates by increasing or decreasing them and selected others, including rates between the management and operational sections, while retaining the total of the prices derived after any other corrections made under (a) and (b) above. Where there is an omission of a line item, no correction is possible, and the offer may be declared non-responsive. Declare as non-responsive and reject any offer from a tenderer who elects not to accept the corrections proposed and subject the tenderer to the sanction under 4.16.2. The tenderer is required to submit balanced unit rates for rate only items in the pricing schedule. The rates submitted for these items will be taken into account in the evaluation of tenders.
5.11.1	The minimum percentage of evaluation points for functionality is not less than 75%. The functionality points can be lowered by the Contractor, (typically by 5/100 points or 5%), should an adequate number of tenderers not achieve the functionality threshold. The bench mark for an adequate number of tenderers is ten (10) tenderers that achieve the functionality points, but it is at the Contractor's discretion and depends on the Works to be subcontracted or any other valid considerations. Score each of the criteria and sub-criteria for functionality (N_F) in accordance with the provisions of the tender data. Calculate the total number of tender evaluation points for functionality using the following formula: $N_F = W_2 \times S_O / M_S$ where: M_S is the maximum possible score (100) for functionality in respect of a submission; and W_2 is the maximum possible number of tender evaluation points (100) awarded for the functionality as stated in the tender data. S_O is the score for functionality allocated to the submission under consideration, calculated as follows; a) Each Tenderer will be evaluated, and points will be allocated according to the criteria in the Table below. b) Information submitted in the returnable Form B3 will be used to allocate points for the respective criteria. c) Only Tenderers who score a minimum of **75 percentage points or** for functionality will be evaluated further. **5.11.1.1 Locality** The points for Locality will be calculated as follows: a) The project area(s) for this subcontract is from Izingolweni through to Murchison b) For the purposes of this evaluation, "based" shall mean the tenderer's current physical address as recorded by the Companies and Intellectual Property Commission (CIPC) of the tenderer's place of business. c) The information provided in the returnable schedules will be used to calculate the points for locality.

d) The maximum number of points that can be awarded for locality is 40.
e) The points for locality will be allocated as follows:

Table 5.11.1.1: Locality

	CIDB Package Category	3 CE
	Typical Package Value	**Up to R 3 mill**
Locality	Tenderer is based in the preferred town.	**40**
	Tenderer is based in the preferred Local Municipality.	20
	Tenderer is based outside the Local Municipality, but in the District Municipality.	10
	Tenderer is based outside the District Municipality, but in the Province.	0
	Tenderer is based outside the Province, but in the RSA.	0

5.11.1.2 Targeted CIDB Grade and class

The points for CIDB Grading Designation will be calculated as follows:
a) The targeted CIDB grading and class for this subcontract is 3 CE
b) The information provided in the returnable schedules will be used to calculate the points for CIDB grading and class.
c) The maximum number of points that can be awarded for CIDB grading designation is 30
d) The points for Targeted CIDB Grading designation will be allocated as follows:

Table 5.11.1.2: Targeted CIDB Grading Designation

	CIDB Package Category	3 CE
	Typical Package Value	**Up to R 3 Mil**
CIDB Grading	Tenderer is registered as a CIDB 1	0
	Tenderer is registered as a CIDB 2 (PE)	10
	Tenderer is registered as a CIDB 3	20
	Tenderer is registered as a CIDB 4	10
	Tenderer is registered as a CIDB 5	0
	Tenderer is registered as a CIDB 6	0
	Tenderer is registered as a CIDB 7 and higher	0

5.11.1.3 Designated Group ownership

The points for Designated Group ownership will be calculated as follows:
a) The targeted Designated Group ownership for this subcontract is Greater than 51% ownership by Black Youth or Black Female
b) The information in the returnable schedules will be used to calculate the points for Designated Group ownership.
c) The maximum number of points that can be awarded for Designated Group ownership is 20
d) The points for Designated Group ownership will be allocated as follows:

Table 5.11.1.3: Designated Group ownership

		CIDB Package Category	3 CE
		Typical Package Value	**Up to R 3 Mil**
Designated Groups (no max score)	Tenderer is 51%+ owned by black people who are youth.	5
	Tenderer is 51%+ owned by black people who are women.	5
	Tenderer is 51%+ owned by black people with disabilities.	5
	Tenderer is 51%+ owned by black people who are military veterans.	5

Table 5.11.1.4: Applicable Experience

The points for Applicable Experience will be calculated as per the table below:

	Experience	Points
Experience (Max 10 Points)	18 months applicable experience.	10
	15 months applicable experience.	8
	12 months applicable experience.	6
	9 months applicable experience.	4
	6 months applicable experience.	2
	3 months applicable experience.	1
	Less than 3 months applicable experience.	0

Table 5.11.1.5: Plant and Equipment

The points for Plant and Equipment will be calculated as per the table below:

	Plant and Equipment	Points
Plant and Equipment (Max 5 Points)	Item 1	2
	Item 2	2
	Item 3	2
	Item 4	2
	Item 5	2

5.11.4

The procedure for the evaluation of responsive tenders is Method 3.

If two or more tenderers score an equal total number of points, and these tenders are also the highest ranked tenders, the contract must be awarded to the tenderer that scored the highest points for B-BBEE.

If functionality is part of the evaluation process and two or more tenderers score equal total points and equal preference points, the subcontract must be awarded to the tenderer that scored the highest points for functionality.

If two or more tenderers score equal total points in all respects, and these tenders are also the highest ranked tenders the award must be decided by the drawing of lots.

5.11.7

The value of W_1 is:

1. 90 where the financial value inclusive of VAT of the lowest responsive tender offer received has a value in excess of R50,000,000.00; or
2. 80 where the financial value inclusive of VAT of the lowest responsive tender offer received equals or is less than R50,000,000.00.

	A is the number calculated using the formula: $A=(1-(P-P_m)/P_m)$ Where: P is the comparative offer of the tender offer under consideration; and P_m is the comparative offer of the most favourable comparative offer. In the event that the calculated value is negative, the allocated score shall be 0 (zero).
5.11.8	Up to 100 minus W1 tender evaluation points will be awarded to tenderers who submit responsive tenders and who are found to be eligible for the preference claimed. Points are based on a tenderer's scorecard measured in terms of the Broad-Based Black Economic Empowerment Act (B-BBEE, Act 53 of 2003) and the Regulations (2017) to the Preferential Procurement Policy Framework Act (PPPFA, Act 5 of 2000). Points awarded will be according to a tenderer's B-BBEE status level of contributor and summarised in the table below:

B-BBEE Status Level of Contributor	Number of points for financial value up to and including R50,000,000	Number of points for financial value above R50,000,000
1	20	10
2	18	9
3	14	6
4	12	5
Other	0	0

Eligibility for preference points is subject to the following conditions:

1. A tenderer's scorecard shall be a B-BBEE Certificate issued in accordance with:
   - the Amended Construction Sector Codes published in Notice 931 of 2017 of Government Gazette No. 41287 on 1 December 2017 by the Department of Trade and Industry.
   - in the event that the Measured Entity operates in more than one sector or a sub-sector, the scorecard for the sector or sub-sector in which the majority of its core activities (measured in terms of annual revenue) are located will be acceptable; and
2. The scorecard shall be submitted as a certificate attached to Returnable Schedule Form A11; and
3. The certificate shall:
   - be valid at the tender closing date; and
   - have been issued by a verification agency accredited by the South African National Accreditation System (SANAS); or
   - be in the form of a sworn affidavit accompanied with an audited financial statement of the year concerned or a certificate issued by the Companies and Intellectual Property Commission in the case of an Exempted Micro Enterprise (EME) with a total annual revenue of less than R3 million if issued in accordance with the amended Construction Sector Codes published in Notice 931 of 2017 of Government Gazette No. 41287 on 1 December 2017 by the Department of Trade and Industry; and
   - have a date of issue less than 12 (twelve) months prior to the original advertised tender closing date (see Tender Data 4.15); and
4. Compliance with any other information requested to be attached to Returnable Schedule Form A11; and
5. In the event of a joint venture (JV), a project-specific consolidated B-BBEE verification certificate in the name of the JV must be issued by a verification agency accredited by the South African National Accreditation System (SANAS) shall be submitted.

5.13	The conditions stated in clauses 5.13(a) to (f) of the Conditions of Tender as well as the following additional clauses 5.13(g) to (m) shall be applied as objective criteria in terms of section 2(1)(f) of the Preferential Procurement Policy Framework Act, 2000 (Act No 5 of 2000) and as compelling and justifiable reasons in terms of Conditions of Tender clause 5.11:

	g) the tenderer or any of its directors is not listed on National Treasury's Register of Tender Defaulters or Restricted Suppliers, in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No 12 of 2004) as a tenderer or person prohibited from doing business with the public sector; h) the tenderer has not abused the Contractor's supply chain management system. i) the tenderer has not failed to perform on any previous contract and has not been given a written notice to this effect. j) the tenderer has not failed to comply with and complete the Declaration Certificate for Local Production and Content (Form A3.5) and the Local Content Declaration: Summary Schedule (Form A3.6) for each product. k) the tenderer is tax compliant. The recommended tenderer who becomes non-compliant, prior to award, shall be notified and must become compliant within 7 working days of the date of being notified. A recommended tenderer who remains non-compliant after the 7 working days of being notified, shall be declared non-responsive. l) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer. The licensed compensation insurer shall be approved by Department of Labour in terms of Section 80 of the Compensation for Injury and Disease Act, 1993 (Act No. 130 of 1993). m) The Contractor has not failed to negotiate acceptable tender sum and/or rates in terms of 5.11.10
5.17	The number of paper copies of the signed contract to be provided by the Contractor is one (1).
5.19	All requests shall be in writing.
ADDITIONAL CONDITIONS OF TENDER CLAUSES:	
Clause Number	**Data**
3.7	**Jurisdiction** Unless stated otherwise in the tender data, each tenderer and the Contractor undertake to accept the jurisdiction of the law courts of the Republic of South Africa.

5.11.10	**Negotiating acceptable tender sum and/or rates** a) High tender sums submitted by Tenderers If the Contractor choose to include work in the subcontract package, for which he has tendered rates for work items in the Main Contract and the tenderer who scored the highest points tendered a higher sum or rates than that of the Contractor, the Contractor may either accept the rates or negotiate with the preferred tenderer. If the Contractor fails to negotiate a reasonable tender sum or rates with the tenderer, he may approach the second highest point scoring, compliant tenderer for negotiation. This process may be repeated until the Contractor manages to negotiate a reasonable tender sum or rates with a compliant tenderer. b) Provisional Sum If a provisional sum in the main contract is provided for the work items in the subcontract package, the Contractor shall report on the feasibility of the highest point scoring compliant tenderer's tender sum and rates to the Engineer. (i) If the highest points scoring compliant tenderer's tender sum and rates are deemed market related by the Engineer, the Contractor shall obtain the approval of SANRAL to utilize the provisional sum provided for the work items. (ii) If the highest points scoring tenderer's tender sum and rates are deemed not market related and SANRAL does not approve the utilization of the relevant provisional sum, the Contractor may either accept the rates or negotiate with the highest points scoring tenderer for a market related tender sum and rates. If the Contractor fails to negotiate market related tender sum and rates with the tenderer, he may approach the next highest point scoring, compliant tenderer for negotiation. This process may be repeated until the Contractor manages to negotiate a reasonable tender sum and rates with a compliant tenderer. c) Low tender sums submitted by Tenderers The Contractor shall report to the Engineer and SANRAL on the feasibility of tender sums, rates or provisional sums of tenderers who tendered exceptionally low. Exceptionally low tender sums, rates or provisional sums are those that are more than ten percent (10%) less than what the Contractor tendered, or in the case of a provisional sum, what is deemed market related by the Engineer. (i) If the tender sums, rates or provisional sums of those tenderers who tendered exceptionally low are deemed to still be feasible by the Engineer, the Contractor may continue to include these tenders in his tender evaluation. (ii) If the tender sums, rates or provisional sums of those tenderers who tendered exceptionally low are deemed not feasible by the Engineer, the Contractor may disqualify these tenders from his tender evaluation.

PART T2: RETURNABLE SCHEDULES

PART T2: RETURNABLE SCHEDULES

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T2.1 LIST OF RETURNABLE DOCUMENTS

Notes to tenderer:

1. **Returnable documents have been based on the SANS Standard Conditions of Tender for Construction Procurement and incorporate National Treasury requirements contained in their Standard Bidding Document (SBD) within them.**
   Returnable documents are separated into the following categories:
   - **(i) Forms, certificates and schedules for completion by the tenderer for use in the quantitative and qualitative evaluation of the tender (Forms A to C).**
   - **(ii) A list of all returnable documents for completion by the tenderer (Form D1).**
2. **Failure to submit fully completed relevant returnable documents may render such a tender offer non-responsive.**
3. **Tenderers shall note that their signatures appended to each returnable form represents a declaration that they vouch for the accuracy and correctness of the information provided.**
4. **Notwithstanding any check or audit conducted by or on behalf of the Contractor, the information provided in the returnable documents is accepted in good faith and as justification for entering into a contract with a tenderer. If subsequently any information is found to be incorrect such discovery shall be taken as wilful misrepresentation by that tenderer to induce the contract. In such event the Contractor has the discretionary right under FIDIC Particular Condition 15.6 to terminate the contract.**
5. **These forms must be completed in non-erasable ink and any alterations made prior to tender closure countersigned by an authorised signatory.**

T2.1 LIST OF RETURNABLE DOCUMENTS

Note to tenderer:
The list of returnable documents is shown in the following table, as indicated by the status of those documents it will be incorporated into the contract document.

FORM	LIST OF RETURNABLE DOCUMENTS	STATUS
FORM A1:	CLARIFICATION BRIEFING	
FORM A2.1:	CERTIFICATE OF AUTHORITY FOR SIGNATORY	
FORM A2.2:	CERTIFICATE OF SINGLE TENDER SUBMISSION	
FORM A2.3:	CERTIFICATE OF FRONTING PRACTICES	
FORM A3.1 (SBD4):	COMPULSORY DECLARATION	CONTRACT
FORM A3.2 (SBD9):	CERTIFICATE OF INDEPENDENT TENDER	CONTRACT
FORM A3.3 (SBD8):	DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES	CONTRACT
FORM A3.4:	REGISTRATION ON NATIONAL TREASURY CENTRAL SUPPLIER DATABASE	CONTRACT
FORM A3.5 (SBD6.2)	DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS	CONTRACT
FORM A4:	SCHEDULE OF DEVIATIONS OR QUALIFICATIONS BY TENDERER	
FORM A5:	SCHEDULE OF ADDENDA TO TENDER DOCUMENTS	
FORM A6 (SBD2):	CERTIFICATE OF TAX COMPLIANCE	CONTRACT
FORM A8:	SCHEDULE OF CURRENT COMMITMENTS	
FORM A9:	CERTIFICATE OF COMPLIANCE WITH COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT,1993	CONTRACT
FORM A10:	REGISTRATION WITH CIDB (If applicable)	CONTRACT
FORM A11 (SBD6.1):	PREFERENCING SCHEDULE - TENDERER'S B-BBEE VERIFICATION	CONTRACT
FORM A12:	LETTER FROM WARD COUNCILLOR AND OR PROOF OF RESIDENCE	
FORM B1:	SCHEDULE OF WORK EXPERIENCE	
FORM B2:	SCHEDULE OF CONTRACTOR'S EQUIPMENT	
FORM B3	FUNCTIONALITY CRITERIA	
FORM C1:	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
FORM D1:	SCHEDULE OF TENDER COMPLIANCE	
C1.1.1 (SBD7):	FORM OF OFFER	CONTRACT
C1.1.2:	FORM OF ACCEPTANCE	CONTRACT
C1.2.3:	CONTRACT DATA – INFORMATION PROVIDED BY THE TENDERER	CONTRACT
C2.2 (SBD3):	PRICING SCHEDULE (AVAILABLE ON CPMC WEBSITE www.c-pmc.co.za)	CONTRACT

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FORM A1: CLARIFICATION BRIEFING

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1 PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

This is to certify that I, ...

representative of (tenderer) .....

of (address) .....

.....

telephone number .....

fax number .....

e-mail.....

read / viewed the clarification briefing presentation presented by the Contractor.

TENDERER'S REPRESENTATIVE (Signature) .....

Unless the attendee's name and details also appear on the e-mail register this Certificate of Attendance shall not be accepted and the tenderer's offer shall be deemed non-responsive and will not be considered.

TENDERER'S REPRESENTATIVE (Signature): .....

CONTRACTOR'S REPRESENTATIVE (Signature): .....

NAME (IN CAPITALS): .....

FORM A2.1: CERTIFICATE OF AUTHORITY FOR SIGNATORY

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1 PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Notes to tenderer:

1. **The signatory for the tenderer shall confirm his/her authority thereto by attaching a duly signed and dated copy of the relevant resolution of the board of directors/partners on the tendering company's letterhead.**
2. **In the event that the tenderer is a joint venture, a certificate is required from each member of the joint venture clearly setting out:**
   - **authority for signatory,**
   - **undertaking to formally enter into a joint venture contract should an award be made to the joint venture,**
   - **name of designated lead member of the intended joint venture, as required by tender condition 4.13.2.**
3. **The resolution below is given as an example of an acceptable format for authorisation, but submission of this page with the example completed shall not be accepted as authorisation of the tenderer's signatory.**

By resolution of the board of directors/partners passed at a meeting held on .....

Mr./Ms. .....

..... , whose signature appears below, has been duly authorised to sign all documents in connection with the tender for:

SUBCONTRACT **.....**

.....

..... (***Insert Contract Number and Description)***

and any contract which may arise there from on behalf of .....

..... **(*enter name of tenderer in block capitals*)**

Proforma

SIGNED ON BEHALF OF THE COMPANY: .....

IN THE CAPACITY OF:.....

DATE:.....

SIGNATURE OF SIGNATORY: .....

WITNESSES: ....

SIGNATURE SIGNATURE

....

NAME (PRINT) NAME (PRINT)

FORM A2.2: CERTIFICATE OF SINGLE TENDER SUBMISSION

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1 PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Notes to tenderer:

1. **This certificate serves as a declaration by the tenderer that a single tender was submitted.**
2. **In the case of a Joint Venture (JV), a separate certificate is to be completed and submitted by each JV member.**

DECLARATION

I, the undersigned, ...
in submitting the accompanying tender on behalf of the tenderer do hereby make the following statements that I certify to be true and complete in every respect:

1. I have read and understand the notes to, and the contents of, this certificate.
2. I understand that the accompanying tender and any other tender shall be disqualified in the event that I, including a Joint Venture partner, or Key Person, participate in more than 1 (one) tender.

SIGNATURE: ..... ……

DATE: ..... ……

NAME: ..... ……

POSITION: ..... ……

FORM A2.3: CERTIFICATE OF FRONTING PRACTICES

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1 PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Fronting Practices

Window-dressing: This includes cases in which black people are appointed or introduced to an enterprise on the basis of tokenism and may be:

- Discouraged or inhibited from substantially participating in the core activities of an enterprise; and
- Discouraged or inhibited from substantially participating in the stated areas and/or levels of their participation;

Benefit Diversion: This includes initiatives implemented where the economic benefits received as a result of the B-BBEE Status of an enterprise do not flow to black people in the ratio as specified in the relevant legal documentation.

Opportunistic Intermediaries: This includes enterprises that have concluded agreements with other enterprises with a view to leveraging the opportunistic intermediary's favourable B-BBEE status in circumstances where the agreement involves:

- Significant limitations or restrictions upon the identity of the opportunistic intermediary's suppliers, service providers, clients or customers;
- The maintenance of their business operations in a context reasonably considered improbable having regard to resources; and
- Terms and conditions that are not negotiated at arms-length on a fair and reasonable basis.

DECLARATION

I, the undersigned, ...
in submitting the accompanying tender on behalf of the tenderer do hereby make the following statements that I certify to be true and complete in every respect:

1. I have read and understand the contents of this certificate.
2. I accept that the Employer may report fronting practices to the Department of Trade and Industry and the BEE commissioner.
3. I accept that intentional misrepresentation by measured entities may constitute fraudulent practices that shall be reported to the Department of Trade and Industry and the BEE commissioner.

SIGNATURE: ..... ……

DATE: ..... ……

NAME: ..... ……

POSITION: ..... ……

FORM A3.1: COMPULSORY DECLARATION (INCORPORATING SBD4)

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1 PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Notes to tenderer:

1. **Any legal person, including persons employed by the State, or persons having a kinship with persons employed by the State, including a blood relationship, may make an offer or offers in terms of this tender. In view of possible allegations of favouritism, should the resulting tender, or part thereof, be awarded to persons employed by the State, or to persons connected with or related to them, it is required that the tenderer or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where:**
   - **the tenderer is employed by the State; and/or**
   - **the legal person on whose behalf the tender document is signed, has a relationship with person/s who are involved in the evaluation and/or adjudication of the tender, or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and/or adjudication of the tender.**
2. **Definitions:**
   - **2.1. "State" means:**
     - **a) any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);**
     - **b) any municipality or municipal entity;**
     - **c) Provincial legislature;**
     - **d) National Assembly or the National Council of Provinces; or**
     - **e) Parliament.**
   - **2.2. "Shareholder" means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.**
3. **In the case of a joint venture (JV), a separate declaration form is to be completed and submitted by each JV member.**

FORM A3.1 (SBD4): COMPULSORY DECLARATION (continued)

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

Section 1: **Enterprise details**

Name of enterprise	
Contact person	
E-mail	
Telephone	
Cell	
Fax	
Physical address	
Postal address	

Section 2: **Particulars of companies and close corporations**

Company / Close Corporation registration number	

Section 3: **SARS information**

Tax reference number	
VAT registration number	(state Not Registered if not registered for VAT)

Section 4: **CIDB registration number (Not applicable for supplier subcontracts or work without CIDB category, where CIDB registration is not required)**

CIDB Registration number	

Section 5: **Particulars of principals**

Principal: means a natural person who is a partner in a partnership, a sole proprietor, a director of a company established in terms of the Companies Act of 2008 (Act No. 71 of 2008) or a member of a close corporation registered in terms of the Close Corporations Act, 1984, (Act No. 69 of 1984)

Full name of principal	Identity number	Personal tax reference number

Attach separate page if necessary.

FORM A3.1 (SBD4): COMPULSORY DECLARATION (continued)

Section 6: **Record in the service of the state**:

Indicate by marking the relevant boxes with a cross, if any principal is currently or has been within the last 12 months in the service of any of the following:

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

If any of the above boxes are marked, disclose the following:

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

Insert separate page if necessary.

Section 7: **Record of family member in the service of the state**:

Family member: a person's spouse, whether in a marriage or in a customary union according to indigenous law, domestic partner in a civil union, or child, parent, brother, sister, whether such relationship results from birth, marriage or adoption

Indicate by marking the relevant boxes with a cross, if any family member of a principal as defined in section 5 is currently or has within the last 12 months been in the service of any of the following:

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

If any of the above boxes are marked, disclose the following:

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

Insert separate page if necessary.

FORM A3.1 (SBD4): COMPULSORY DECLARATION (continued)

Section 8: **Record of termination of previous contracts with an organ of state**

Was any contract between the tendering entity, including any of its joint venture partners, terminated during the past five years for reasons other than the employer no longer requiring such works or the employer failing to make payment in terms of the contract?

☐ Yes ☐ No (tick appropriate box)

If yes, provide particulars:

Insert separate page if necessary

Section 9: **Declaration**

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the tendering entity, confirms that the contents of this Declaration are within my personal knowledge, save where stated otherwise in an attachment hereto, and to the best of my belief is both true and correct, and that:

i) neither the name of the tendering entity, nor any of its principals, appears on:
   a) the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004 (Act No. 12 of 2004); or
   b) National Treasury's Database of Restricted Suppliers (see www.treasury.gov.za);
ii) the tendering entity or any of its principals has not been convicted of fraud or corruption by a court of law (including a court outside of the Republic of South Africa) within the last five years;
iii) any principal who is presently employed by the state has the necessary permission to undertake remunerative work outside such employment (attach permission to this declaration);
iv) the tendering entity is not associated, linked or involved with any other tendering entities submitting tender offers;
v) the tendering entity has not engaged in any prohibited restrictive horizontal practices, including consultation, communication, agreement, or arrangement with any competing or potential tendering entity regarding prices, geographical areas in which goods and services will be rendered, approaches to determining prices or pricing parameters, intentions to submit a tender or not, the content of the submission (specification, timing, conditions of contract, etc.) or intention to not win a tender;
vi) the tendering entity has no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
vii) neither the tenderer nor any of its principals owes municipal rates and taxes or municipal service charges to any municipality or a municipal entity, and are not in arrears for more than three months;
viii) SARS may, on an on-going basis during the term of the contract, disclose the tenderer's tax compliance status to the Employer and, when called upon to do so, obtain the written consent of any subcontractors who are subcontracted to execute a portion of the contract that is entered into in excess of the threshold prescribed by National Treasury, for SARS to do likewise.

I, the undersigned .....
certify that the information furnished in Form A3 above is correct. I accept that the Employer may reject the tender or act against me in terms of 5.7 of the Conditions of Tender should this declaration prove to be false.

....
Signature (duly authorised) Date

....
Position Name of Enterprise

FORM A3.1 (SBD4): COMPULSORY DECLARATION (continued)

NOTE 1: The Standard Conditions of Tender contained in SANS 10845-3 prohibits anticompetitive practices (clause 3.1) and requires that tenderers avoid conflicts of interest, only submit a tender offer if the tenderer or any of his principals is not under any restriction to do business with the Employer (4.1.1) and submit only one tender either as a single tendering entity or as a member in a joint venture (clause 4.13.1). Clause 5.7 also empowers the Employer to disqualify any tenderer who engages in fraudulent and corrupt practice. Clause 3.1 also requires tenderers to comply with all legal obligations.
NOTE 2: Section 30(1) of the Public Service Act, 1994, prohibits an employee (person who is employed in posts on the establishment of departments) from performing or engaging remunerative work outside his or her employment in the relevant department, except with the written permission of the executive authority of the department. When in operation, Section 8(2) of the Public Administration Management Act, 2014, will prohibit an employee of the public administration (i.e. municipalities and all national departments, national government components listed in Part A of Schedule 3 to the Public Service Act, provincial departments including the office of the premier listed in Schedule 1 of the Public Service Act and provincial departments listed in schedule 2 of the Public Service Act, and provincial government components listed in Part B of schedule 3 of the Public Service Act) or persons contracted to executive authorities in accordance with the provisions of section 12A of the Public Service Act of 1994 or persons performing similar functions in municipalities, from conducting business with the State or to be a director of a public or private company conducting business with the State. The offence for doing so is a fine or imprisonment for a period not exceeding five years, or both. It is also a serious misconduct which may result in the termination of employment by the employer.
NOTE 3: Regulation 44 of Supply Chain Management regulations issued in terms of the Municipal Finance Management Act of 2003 requires that municipalities and municipal entities should not award a contract to a person who is in the service of the State, a director, manager or principal shareholder in the service of the State or who has been in the service of the State in the previous twelve months.
NOTE 4: Regulation 45 of Supply Chain Management regulations requires a municipality or municipal entity to disclose in the notes to the annual statements particulars of any award made to a close family member in the service of the State.
NOTE 5: Corrupt activities which give rise to an offence in terms of the Prevention and Combating of Corrupt Activities Act of 2004, include improperly influencing in any way the procurement of any contract, the fixing of the price, consideration or other moneys stipulated or otherwise provided for in any contract, and the manipulating by any means of the award of a tender.
NOTE 6: Section 4 of the Competition Act of 1998 prohibits restrictive horizontal practice, including agreements between parties in a horizontal relationship, which have the effect of substantially preventing or lessening competition, directly or indirectly fixing prices or dividing markets or constituting collusive tendering. Section 5 also prohibits restrictive vertical practices. Any restrictive practices that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties.

FORM A3.2: CERTIFICATE OF INDEPENDENT TENDER (INCORPORATING SBD9)

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Notes to tenderer:

1. **This certificate conforms to Treasury Regulation 16A9 and the requirement of section 4 (1) (b) (iii) of the Competition Act, 1998 (Act No 89 of 1998), as amended, that prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive tendering.**
2. **Collusive tendering is a conspiracy between businesses that would normally be expected to compete, to agree not to compete, in a tender process.**
3. **This certificate serves as a declaration by the tenderer that the tender submitted is free from any collusion with a competitor.**
4. **If the tenderer is a joint venture, a declaration is required from each member of the joint venture.**

Declaration

I, the undersigned, in submitting the accompanying tender on behalf of the tenderer do hereby make the following statements that I certify to be true and complete in every respect:

1. I have read and understand the notes to, and the contents of, this Certificate;

2. I understand that the accompanying tender will be disqualified if this Certificate is found to be not true and complete in every respect;

3. I am authorised by the tenderer to sign this Certificate, and to submit the accompanying tender, on behalf of the tenderer;

4. Each person whose signature appears on the accompanying tender has been authorised by the tenderer to determine the terms of, and to sign the tender, on behalf of the tenderer;

5. For the purposes of this Certificate and the accompanying tender, I understand that the word “competitor” shall include any individual or organisation, other than the tenderer, whether or not affiliated with the tenderer, who:

a) has been requested to submit a tender in response to this tender invitation;
b) could potentially submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and
c) provides the same goods and services as the tenderer and/or is in the same line of business as the tenderer.

6. The tenderer has arrived at the accompanying tender independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium will not be construed as collusive tendering.

7. In particular, without limiting the generality of statement 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:

a) prices;
b) geographical area where product or service will be rendered (market allocation);
c) methods, factors or formulas used to calculate prices;
d) the intention or decision to submit, or not to submit, a tender;
e) the submission of a tender which does not meet the specifications and conditions of the tender; or
f) tendering with the intention not to win the tender.

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this tender relates.

9. The terms of the accompanying tender have not been, and will not be, disclosed by the tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening or of the awarding of the contract.

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to tenders and contracts, tenders that are suspicious will be reported to the Competitions Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act, 1998 (Act No 89 of 1998) and/or may be reported to the National Prosecuting Authority for criminal investigation and/or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No 12 of 2004) or any other applicable legislation.

SIGNATURE: .....

NAME: .....

POSITION: .....

DATE: .....

NAME OF TENDERER: .....

FORM A3.3: DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (INCORPORATING SBD8)

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Notes to tenderer:

1. **This declaration:**
   - **(i) must form part of all tenders submitted: and**
   - **(ii) if the tenderer is a joint venture, a declaration is required from each member of the joint venture.**
2. **This form serves as a declaration to be used by institutions in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.**
3. **The tender of any tenderer may be disregarded if that tenderer or any of its directors has:**
   - **(i) abused the institution's supply chain management system;**
   - **(ii) committed fraud or any other improper conduct in relation to such system; or**
   - **(iii) failed to perform on any previous contract.**
4. **In order to give effect to the above, the following questionnaire must be completed and submitted with this tender.**

4.1	Is the tenderer or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? **Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/ Authority of the institution that imposed the restriction after the *audi alteram parlem* rule was applied.** The Database of Restricted Suppliers now resides on the National Treasury website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
4.1.1	If Yes, furnish particulars:		
4.2	Is the tenderer or any of its directors listed on the Register for Tender Defaulters in terms of Section 29 of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No 12 of 2004)? **The Register for Tender Defaulters can be accessed on the National Treasury website www.treasury.gov.za by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
4.2.1	If Yes, furnish particulars:		

4.3	Was the tenderer or any of its directors convicted by a court of law (including a court outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐
4.3.1	If Yes, furnish particulars:		
4.4	Was any contract between the tenderer and any organ of State terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐
4.4.1	If Yes, furnish particulars:		

DECLARATION

I, the undersigned, ...
certify that the information furnished on this declaration form is true and correct.

I accept that, in addition to cancellation of a contract, action may be taken against me should this declaration prove to be false.

SIGNATURE: .....

POSITION: .....

DATE: .....

NAME OF TENDERER: .....

FORM A3.4: REGISTRATION ON NATIONAL TREASURY CENTRAL SUPPLIER DATABASE

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

The tenderer shall provide a printed copy of the Active Supplier Listing on the National Treasury Central Supplier Database. (www.treasury.gov.za). In the case of a joint venture (JV), the tenderer shall provide printed copies of the Active Supplier Listing on the National Treasury Central Supplier Database for each member of the JV.

Name of Contractor: .....

CSD Master Registration Number (Supplier Number): .....

Supplier Commodity: .....

Delivery Location: .....

SIGNED BY TENDERER: .....

FORM A3.5: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS (INCORPORATING SBD6.2)

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid are indicated in the below table:

1. **The Tenderer to confirm that the minimum threshold will be achieved by either indicating the percentage to be achieved or by indicating "Yes" or "✓" in the below table**

Description of services, works or goods	**Stipulated Minimum threshold**	**Minimum threshold to be achieved by Tenderer**
Steel value-added construction material products		

SIGNED BY TENDERER: .....

FORM A4: SCHEDULE OF DEVIATIONS OR QUALIFICATIONS BY TENDERER

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Page	Description

SIGNED BY TENDERER: .....

FORM A5: SCHEDULE OF ADDENDA TO TENDER DOCUMENTS

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

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

	Date	**Title or Details**
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

SIGNED BY TENDERER: .....

FORM A6: CERTIFICATE OF TAX COMPLIANCE (INCORPORATING SBD2)

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

The tenderer shall complete the declaration below.

I, ... (name)
the undersigned in my capacity as ..... (position)
on behalf of ..... (name of company)
herewith grant consent that SARS may disclose to the Contractor or to the South African National Roads Agency SOC Limited (SANRAL) our tax compliance status. For this purpose, our unique security personal identification number (PIN) is .....
our tax reference number is .....
and our tax clearance certificate number is .....

In the event of a joint venture, each member shall comply with the above requirement.

SIGNED BY TENDERER: .....

FORM A8: SCHEDULE OF CURRENT COMMITMENTS

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Notes to tenderer:

1. **The tenderer shall list below all contracts currently under construction or awarded and about to commence and tenders for which offers have been submitted but awards not yet made.**
2. **In the event of a joint venture enterprise, details of all the members of the joint venture shall similarly be attached to this form.**
3. **The lists must be restricted to not more than 10 contracts and 10 tenders. If a tenderer's actual commitments or potential commitments are greater than 10 each, those listed should be in descending order of expected final contract value or sum tendered.**

Table 1: CONTRACTS AWARDED				
Employer	Contract	Expected total value of contract (incl. VAT)	Duration (Months)	Expected completion date

Table 2: TENDERS NOT YET AWARDED				
Employer	Contract	Sum Tendered (incl. VAT)	Tendered Duration (Months)	Expected commencement

SIGNED BY TENDERER: .....

FORM A9: CERTIFICATE OF COMPLIANCE WITH COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT, 1993

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Notes to tenderer:

1. **Discovery that the tenderer has failed to make proper disclosure may result in the Contractor terminating a contract that flows from this tender on the ground that it has been rendered invalid by the tenderer's misrepresentation.**
2. **The tenderer shall attach to this Form evidence that he is registered and in good standing with the compensation fund or with a licensed compensation insurer who is approved by the Department of Labour in terms of section 80 of the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No 130 of 1993) (COID). If the tenderer fails to meet this requirement, the tenderer will be given 5 calendar days to become compliant.**
3. **The tenderer is required to disclose, by also attaching documentary evidence to this form, all inspections, investigations and their outcomes conducted by the Department of Labour into the conduct of the tenderer at any time during the 36 months preceding the date of this tender.**
4. **In the event of a joint venture, each and every member of the unincorporated Joint Venture shall comply with the above requirements.**

SIGNED BY TENDERER: .....

FORM A10: CERTIFICATE OF REGISTRATION WITH CIDB

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

The tenderer shall provide a printed copy of the Active Contractor's Listing off the CIDB website www.cidb.org.za. Tenderers whose CIDB registration expires within 21 days after close of tender shall attach proof of their application for re-registration (refer to tender data clause 4.1.1). In the case of a Joint Venture, a printed copy of the Active Contractor's Listing must be provided for each member of the Joint Venture.

Complete the following details of his registration with the Construction Industry Development Board.

Name of Contractor: .....

Contractor Grading Designation:.....

CIDB Contractor Registration Number: .....

Expiry Date: .....

SIGNED BY TENDERER: .....

FORM A11: PREFERENCING SCHEDULE – TENDERER'S B-BBEE VERIFICATION (INCORPORATING SBD6.1)

SUBCONTRACT No: RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1 PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Notes to Tenderer:

1. **The tenderer shall attach to this form a valid B-BBEE verification certificate issued in accordance with:**
   - **the amended Construction Sector Codes published in Notice 931 of 2017 of Government Gazette No. 41287 on 1 December 2017 by the Department of Trade and Industry.**
   - **in the event that the Measured Entity operates in more than one sector or sub-sector, the scorecard for the sector or sub-sector in which the majority of its core activities (measured in terms of Annual Revenue) are located will be acceptable.**
2. **The certificate shall:**
   - **have been issued by a verification agency accredited by the South African National Accreditation System (SANAS); or**
   - **be in the form of a sworn affidavit or a certificate issued by the Companies and Intellectual Property Commission in the case of an Exempted Micro Enterprise (EME) with a total annual revenue of less than R3 million if issued in accordance with the amended Construction Sector Codes published in Notice 931 of 2017 of Government Gazette No. 41287 on 1 December 2017 by the Department of Trade and Industry; and**
   - **be valid at the original advertised tender closing date; and**
   - **have a date of issue less than 12 (twelve) months prior to the original advertised tender closing date (see Tender Data 4.15).**
3. **In the event of an un-incorporated joint venture (JV), a project specific consolidated B-BBEE verification certificate in the name of the JV shall be attached, as well as a valid B-BBEE verification certificate for each member of the JV on which the JV certificate was calculated.**
4. **The attached verification certificate and the associated assessment report shall comply with the requirements of Tender Data clause 5.11.8 and shall identify:**
   - **(a) The name and domicilium citandi et executandi of the tenderer.**
   - **(b) The registration and VAT number of the tenderer.**
   - **(c) The dates of granting of the B-BBEE score and the period of validity.**
   - **(d) The expiry date of the verification certificate.**
   - **(e) A unique identification number.**
   - **(f) The standard and/or normative document, including the issue and/or revision used to evaluate the tenderer.**
   - **(g) The name and/or mark/logo of the B-BBEE verification agency or registered auditor.**
   - **(h) The category (Generic, QSE, EME) in which the tenderer has been measured.**
   - **(i) The B-BBEE status level.**
   - **(j) The South African National Accreditation System (SANAS) logo on the verification certificate once verification agencies have been accredited.**
   - **(k) The B-BBEE procurement recognition level.**
   - **(l) The score achieved per B-BBEE element.**
   - **(m) The % black shareholding.**
   - **(n) The % black women shareholding.**
   - **(o) The % black persons with disabilities shareholding**
   - **(p) The % black youth shareholding**
   - **(q) The % black people living in rural or underdeveloped areas or townships shareholding**
   - **(r) The % black military veterans shareholding**
   - **(s) The value-added status of the tenderer.**

5. **The Employer will not be responsible to acquire data that it needs for its own reporting systems and which may not form part of a verification agency's standard certificate format. The tenderer, at its own cost, must acquire any missing specified data listed in 4 above from its selected verification agency or registered auditor and have it recorded on the certificate. Alternatively, such missing data must be supplied separately, but certified as correct by the same verification agency or registered auditor and also attached to this form.**

SIGNED BY TENDERER: .....

FORM A12: LETTER FROM WARD COUNCILLOR AND OR PROOF OF RESIDENCE

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

The tenderer shall provide a Certified letter from the local Traditional Council or provided sufficient proof of their business address by submitting a certified lease agreement or municipal account should they wish to claim the functionality points detailed in clause 5.11.1.

Complete the following details regarding the business physical address.

Name of Contractor: .....

Contractors Physical address: .....

.....

.....

SIGNED BY TENDERER: .....

FORM B1: SCHEDULE OF WORK EXPERIENCE

SUBCONTRACT No: SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1 PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Notes to tenderer:

1. **The information in this returnable form for work over the last 5 years will be utilised to calculate points for Previous Relevant Experience (as per Tender Data 5.11.1)**

EMPLOYER (NAME, TEL NO & FAX NO)	CONSULTING ENGINEER (NAME, TEL NO & FAX NO)	NATURE OF WORK	VALUE OF WORK	YEAR COMPLETED

SIGNED BY TENDERER: .....

FORM B2: SCHEDULE OF CONTRACTOR'S EQUIPMENT

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Notes to tenderer:

1. **The tenderer shall provide details of the major plant and equipment required for this contract.**
2. **The information in this returnable form will be utilized to calculate points for Relevant Construction Equipment (as per Tender Data 5.11.1)**
3. **The tenderer shall state below the number of each construction plant to be used on this contract and what constructional plant will be immediately available for this contract, what constructional plant will become available by virtue of outstanding orders, and what further constructional plant will be acquired or hired for the work should the tenderer be awarded the contract. The tender to indicate: Constructional plant owned and immediately available (I); Constructional plant on order (O) (State details of arrangements made, with delivery dates); Constructional plant that will be hired (H) (State details of delivery arrangements)**

PLANT AND EQUIPMENT TYPE	NUMBER TO BE USED ON THIS CONTRACT	DATE OF MANUFACTURE	AVAILABILITY (State either I, O or H)
Asphalt Paver			
Pneumatic Roller			
Smooth Drum Roller			
Handheld mechanical Brooms			

SIGNED BY TENDERER: .....

FORM B3: FUNCTIONALITY CRITERIA

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Note to tenderer:
The tenderer shall provide the following functionality criteria in the below table

<table>
<tr><th>FUNCTIONALITY CRITERIA</th><th colspan="2">INFORMATION REQUIRED</th></tr>
<tr><td rowspan="2">Locality</td><td colspan="2">Tenderer address (complete address below and attach proof of address as recorded by the Companies and Intellectual Property Commission (CIPC) of the tenderer’s place of business)</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td rowspan="2">CIDB Grade and class (not applicable for supplier subcontracts or work without CIDB category, where CIDB registration is not required)</td><td colspan="2">Indicate Tenderer CIDB grade and class below</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td></td><td colspan="2"></td></tr>
<tr><td>Plant and equipment</td><td colspan="2">Complete information in Form B2</td></tr>
<tr><td rowspan="6">Designated group ownership</td><td colspan="2">Select the appropriate Designated Group ownership of the tenderer below as per B-BBEE certificate (mark with X):</td></tr>
<tr><td>≥51% ownership by black Youth</td><td></td></tr>
<tr><td>≥51% ownership by black Women</td><td></td></tr>
<tr><td>51% ownership by black Military veterans</td><td></td></tr>
<tr><td>≥51% ownership by black Disabled persons (Differently abled)</td><td></td></tr>
<tr><td>None of the above</td><td></td></tr>
</table>

SIGNED BY TENDERER: .....

FORM C1: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Note to tenderer:
If the tenderer should require additional compensation for his obligations under section 1300 (over and above the total tendered for items B13.01(a), (b) and (c)) by including such additional compensation in the tendered rates and/or lump sum of items in the bill of quantities, these items and the value of such additional compensation shall also be set out in a letter attached to this form.

Should the combined, extended total tendered for Item B13.01 The contractor's general obligations:

a) Fixed obligations
b) Value-related obligations
c) Time-related obligations

exceed a maximum of 15% of the tender sum, the tenderer shall clearly set out his reasons for tendering in this manner in a letter attached to this page.

The Contractor will duly consider these reasons but reserves the right to consider the tendered rates to be imbalanced and to deal with them in terms of Tender Data clause 5.9 contained in this volume.

Total tendered for Item B13.01 expressed as a percentage of the tender sum (excluding VAT) ……%

SIGNED BY TENDERER: .....

FORM D1: SCHEDULE OF TENDER COMPLIANCE

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

FORM NO / SBD NO	FORM DESCRIPTION	TICK IF COMPLETED
FORM A1:	CLARIFICATION BRIEFING	
FORM A2.1:	CERTIFICATE OF AUTHORITY FOR SIGNATORY	
FORM A2.2:	CERTIFICATE OF SINGLE TENDER SUBMISSION	
FORM A2.3:	CERTIFICATE OF FRONTING PRACTICES	
FORM A3.1 (SBD4):	COMPULSORY DECLARATION	
FORM A3.2 (SBD9):	CERTIFICATE OF INDEPENDENT TENDER	
FORM A3.3 (SBD8):	DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES	
FORM A3.4:	REGISTRATION ON NATIONAL TREASURY CENTRAL SUPPLIER DATABASE	
FORM A3.5 (SBD6.2)	DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS	
FORM A4:	SCHEDULE OF DEVIATIONS OR QUALIFICATIONS BY TENDERER	
FORM A5:	SCHEDULE OF ADDENDA TO TENDER DOCUMENTS	
FORM A6 (SBD2):	CERTIFICATE OF TAX COMPLIANCE	
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SIGNED BY TENDERER: .....

PART C1: AGREEMENTS & CONTRACT DATA

PART C1 AGREEMENTS AND CONTRACT DATA

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C1.1 FORMS OF OFFER AND ACCEPTANCE

C1.1.1 FORM OF OFFER

RAUBEX KZN (PTY) LTD
Procurement Manager
10 Westgate Pl,
Tollgate,
Pinetown,
3610

Dear Sir,

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

1. I/we, by signing this form of offer acknowledge it is the equivalent of the Letter of Subcontractor's Offer as defined in clause 1.1.10 in the "Conditions of Subcontract for Construction for Building and Engineering Works designed by the Employer" (2011), published by the International Federation of Consulting Engineers (FIDIC).

2. I/we, confirm that I/we practise the principles of corporate governance that abhors corruption and fraud and that I/we have examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules and am/are duly authorised to represent and commit the tenderer to the contractual obligations contained therein.

3. I/we further confirm that by submitting this offer the tenderer accepts the conditions of tender and offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of tender and the conditions of contract identified in the contract data.

4. **PRICE OFFERED**

THE OFFERED TOTAL OF THE PRICES (INCLUSIVE OF VALUE ADDED TAX) BROUGHT FORWARD FROM SECTION C2.2: PRICING SCHEDULE SUMMARY IS

212-2018/1 WP 1 – ASPHALT BASE AND SURFACING.....

.....

.....

.....(in words)

(R ..... in figures)

I/we confirm that if any difference between the total of the Pricing Schedule Summary and the amounts stated above exists, the total in the Pricing Schedule Summary shall apply.

THE OFFERED TOTAL OF THE PRICES (INCLUSIVE OF VALUE ADDED TAX) BROUGHT FORWARD FROM SECTION C2.2: PRICING SCHEDULE SUMMARY IS

212-2018/1 WP 2 – ASPHALT BASE AND SURFACING.....

.....

.....

.....(in words)

(R ..... in figures)

I/we confirm that if any difference between the total of the Pricing Schedule Summary and the amounts stated above exists, the total in the Pricing Schedule Summary shall apply.

5. **PREFERENCE CLAIMED**

I/we claim the following B-BBEE contributor status level ..... as per Returnable Schedule Form A11: Tenderer's B-BBEE Verification Certificate subject to Tender Data 5.11.8. In the event of any difference between the above stated status level and the Verification Certificate attached to Form A11, the Verification Certificate shall apply.

6. You may accept this offer by signing and returning to the tenderer one copy of the Form of Acceptance before the end of the period of validity stated in the tender data, (or at the end of any agreed extension thereof), whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

7. Notwithstanding anything contained in a covering letter to this tender, I/we declare this offer is submitted entirely without deviations or qualifications other than those stipulated in Form A4: Schedule of Deviations or Qualifications by the tenderer and that it is made free from any fraud, corruption and misrepresentation.

Yours faithfully

SIGNATURE: ..... DATE:.....

NAME (IN CAPITALS): .....

CAPACITY: .....

NAME AND ADDRESS OF ORGANISATION: .....

.....

NAME AND SIGNATURE OF WITNESSES:

WITNESS 1:

SIGNATURE: .....

NAME (IN CAPITALS): .....

WITNESS 2:

SIGNATURE: .....

NAME (IN CAPITALS): .....

C1.1.2 FORM OF ACCEPTANCE

To

Dear Sir,

SUBCONTRACT No: RAUBEX-CPG 212-2018/1 WP 1-4

UNDER CONTRACT SANRAL N.002-212-2018/1 PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

1. It is our pleasure to inform you that the Contractor accepts your ***select if applicable corrected/corrected alternative/alternative*** offer in the amount of R…….. (i.e. including VAT but excluding CPA, and any contingent sum not in the priced schedule) for a contract period of ..... months and with a Base date of .....(***28 days prior to the closing date of subcontract tender)***

2. The amount due may not be the accepted price but payment shall be made in accordance with the conditions of contract identified in the contract data.

3. This Form of Acceptance is the equivalent of the Contractors Letter of Acceptance as defined in clause 1.1.6 of the "Conditions of Subcontract for Construction for Building and Engineering Works designed by the Employer" (2011), published by the International Federation of Consulting Engineers (FIDIC).

4. Acceptance shall form an agreement between us according to the terms and conditions contained in this form and in the contract that is comprised of:

   Part C1: Agreements and Contract Data (including this form of acceptance),
   Part C2: Pricing Data,
   Part C3: Scope of the Work,
   Part C4: Site Information, and
   Part C5: Annexures

   together with issued drawings and other documents, or parts thereof, which may be incorporated by reference into the Parts listed above.

Proforma

5. Deviations and/or qualifications included in your offer as well as any changes to the terms of the offer agreed by us during the process of offer and acceptance shall not be valid unless contained in the appended schedule of deviations. In the event that an alternative offer is accepted, it is a fundamental condition of acceptance that all responsibilities and concomitant liabilities arising from the alternative design pass from us to you. Addenda issued during the tender period are deemed not to be deviations to the tender documents and schedules.

6. Within 14 calendar days of the date of this Form of Acceptance (including the schedule of deviations if any) you shall deliver to us:
   i. Fully completed and signed Form C1.1.3 Appendix to Form of Acceptance
   ii. Fully completed and signed Form C1.1.4 Tax compliance
   iii. Fully completed and signed Form C 1.1.5 Agreement in terms of the OHS Act and Regulations.
   iv. Proof that you are registered and in good standing with the compensation fund or with a licensed compensation insurer.
   v. A completed and signed Form C1.1.6 Form of Banking Details

   Failure to fulfil any of the above obligations shall constitute a repudiation of this agreement and we may at our discretion apply any rights of remedy including barring you from tendering on any of our future tenders for a period to be determined by us, but not less than six (6) months, from the date of tender closure.

7. The effective date of the Subcontract shall be the date of this Form of Acceptance unless you, within four (4) calendar days of the effective date, notify us in writing of any justification why you cannot accept the contents of this agreement.

8. The effective date of the Subcontract shall be the date of this Form of Acceptance unless you, within four (4) calendar days of the effective date, notify us in writing of any justification why you cannot accept the contents of this agreement.

9. The Subcontract Commencement Date is …….

10. Notwithstanding that a full, original-signed copy of the Subcontract document containing all contract data and schedules (including that of accepted deviations) will be delivered to you, this Form of Acceptance constitutes the binding Subcontract between us.

11. Please contact …… at ……. to make arrangements for the signing of the Subcontract documents.

Proforma

SIGNATURE: ..... DATE:.....

NAME (IN CAPITALS): .....

CAPACITY: Managing Director

SUBCONTRACTOR'S NAME AND ADDRESS:

NAME & SIGNATURE OF WITNESSES:

WITNESS 1:

SIGNATURE: .....

NAME (IN CAPITALS): .....

WITNESS 2:

SIGNATURE: .....

NAME (IN CAPITALS): .....

C1.1.3 APPENDIX TO FORM OF ACCEPTANCE

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Schedule of deviations

The deviations listed below constitute agreed variations/amendments to the tender data and schedules negotiated between the Subcontractor and the Contractor based on information provided in Form A4: Schedule of Variations or Deviations by Subcontractor, or imposed or agreed conditions of award. Addenda issued during the tender period are deemed not to be variations to the tender.

1. Subject: .....

   Details: .....

2 Subject: .....

   Details: .....

3 Subject: .....

   Details: .....

4 Subject: .....

   Details: .....

Proforma

By the duly authorised representatives signing this agreement, the Contractor and the tenderer agree to and accept the schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the returnable schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the tenderer and the Employer during this process of offer and acceptance.

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

SIGNATURE: ..... DATE:.....

NAME (IN CAPITALS): .....

CAPACITY: .....

NAME AND ADDRESS OF CONTRACTOR: .....

.....

C1.1.4 TAX COMPLIANCE

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Note:
In terms of National Treasury Instruction No 3 of 2014/2015 with reference to the Public Finance Management Act, 1999 (Act No 1 of 1999) and Regulations, the contractor and subcontractors are required to provide the Employer with written confirmation to access the SARS Electronic Tax Compliance Status (TCS) System to verify and continuously track the tax compliance status of all persons conducting business with the State.

The Subcontractor shall complete the declaration below.

Proforma

I, ... (name)

the undersigned in my capacity as ..... (position)

on behalf of .....

..... (name of company)

herewith grant consent that SARS may disclose to .....

.....

our tax compliance status on an ongoing basis for the Subcontract term.

For this purpose, our unique security personal identification number (PIN) is .....,

our tax reference number is ……..….. and our tax clearance certificate number is .....

In addition, the Subcontractor shall obtain written consent from each of its subcontractors, undisclosed principals and partners involved in this Subcontract confirming that SARS may, on an ongoing basis during the Subcontract term, disclose the subcontractors' tax compliance status to the Employer. For this purpose the Contractor shall provide the Employer with the unique security personal identification number (PIN), tax reference number and tax clearance certificate for each of its subcontractors, undisclosed principals and partners involved in this Subcontract.

SIGNATURE: .....

DATE: .....

C1.1.5 AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993(ACT NO. 85 OF 1993) AND CONSTRUCTION REGULATIONS, 2014

This AGREEMENT made at.....

on this the ……..…… day of ……..…….. in the year …… between (hereinafter called "the Contractor") on

the one part, herein represented by .....

in his capacity as .....

and ..... (hereinafter called "the Mandatory")

of the other part, herein represented by .....

in his capacity as .....

WHEREAS the Contractor is desirous that certain Works be constructed, namely

SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1/ PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

and has accepted a tender by the Mandatory for the construction, completion & maintenance of such works and whereas the Contractor and the Mandatory have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatory with the provisions of the Occupational Health and Safety Act 1993 (Act 85 of 1993);

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. The Mandatory shall execute the work in accordance with the contract documents pertaining to this Subcontract.

2. This Agreement shall hold good from its commencement date, to either:
   (a) the date of the Performance Certificate issued in terms of sub-clause 11.3 of the FIDIC Conditions of Subcontract for Construction for building and engineering works designed by the Employer, 2011 (hereinafter referred to as "the GCC"), as contained in Volume 1 of the contract documents pertaining to this Subcontract, or
   (b) the date of termination of the Subcontract in terms of clauses 15, 16 or 19 of the GCC.

3. The Mandatory declares himself to be conversant with the following:
   (a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act.
      (i) Section 8: General duties of Contractors to their employees.
      (ii) Section 9: General duties of Contractors and self-employed persons to persons other than employees.
      (iii) Section 37: Acts or omissions by employees or mandatories and
      (iv) Sub-section 37(2) relating to the purpose and meaning of this Agreement.
   (b) The procedures and safety rules of the Contractor as pertaining to the Mandatory and to all his Service Providers.

4. In addition to the requirements of sub-clause 2.2 the GCC and all relevant requirements of Volume 3 of the contract documents pertaining to this Subcontract, the Mandatory agrees to execute all the works forming part of this Subcontract and to operate and utilize all machinery, plant and equipment in accordance with The Act.

5. The Mandatory is responsible for the compliance with the Act by all his Subcontractors, whether or not nominated and/or approved by the Contractor.

6. The Mandatory warrants that all his and his Subcontractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act 1993 which cover shall remain in force whilst any such workmen are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Contractor upon signature of the agreement

7. The Mandatory undertakes to ensure that he and/or his Subcontractors and/or their respective employees will at all times comply with the following conditions:
   (a) The Mandatory shall assume the responsibility in terms of Section 16.1 of The Act. The Mandatory shall not delegate any duty in terms of Section 16.2 of The Act without the prior written approval of the Contractor. If the Mandatory obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Contractor.
   (b) All incidents referred to in The Act shall be reported by the Mandatory to the Department of Labour as well as to the Contractor. The Contractor will further be provided with copies of all written documentation relating to any incident.
   (c) The Contractor hereby obtains an interest in the issue of any formal enquiry conducted in terms of section 32 of The Act into any incident involving the Mandatory and/or his employees and/or its Subcontractors.

Proforma

In witness thereof the parties hereto have set their signatures hereon in the presence of the subscribing witnesses:

SIGNED FOR AND ON BEHALF OF THE CONTRACTOR .....

WITNESS: .....

NAME (IN CAPITALS): ....

SIGNED FOR AND ON BEHALF OF THE MANDATARY: .....

WITNESS: .....

NAME (IN CAPITALS): ....

C1.1.6 FORM OF BANKING DETAILS

Notes to Subcontractor:
1. The Contractor applies an Electronic Funds Transfer system for all payments.

To:
The Subcontractor

Dear Sir

SUBCONTRACT No: SUBCONTRACT NO. RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1 PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

BANKING DETAILS

By signing this document, we accept the following:
- The banking details submitted are those of and we take full responsibility for their correctness.
- We indemnify the Contractor from any and all outcomes if an electronic transfer is made into an incorrect bank account using the banking details submitted.

Account Name:.....……

Bank: .....……

Branch Name: .....……

Branch Code: .....……

Account Number:.....……

Proforma

Yours faithfully

.....
Authorised Signatory for

DATE: ……

C1.2 CONTRACT DATA

C1.2.1 CONDITIONS OF SUBCONTRACT

Note to tenderer

1. The Conditions of Subcontract comprise the "General Conditions of Subcontract", which form part of the "FIDIC Conditions of Subcontract for Construction", First Edition 2011, publish by the International Federation of Consulting Engineers (FIDIC), and the following "Particular Conditions of Subcontract", which include amendments and additions to these General Conditions of Subcontract. as prescribed by the Contractor.

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PART A: CONDITIONS OF SUBCONTRACT FOR CONSTRUCTION - FIDIC AMENDMENTS

Up to 29 January 2021 the following amendments have been issued by FIDIC.

PART B: PARTICULAR CONDITIONS OF SUBCONTRACT

The following additional amendments to the FIDIC Conditions of Subcontract for Construction, 2011 apply to this contract.

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PARTICULAR CONDITIONS AMENDING THE GENERAL CONDITIONS OF SUBCONTRACT FOR CONSTRUCTION (FIDIC)

1.1 Subcontract Definitions

"**Appendix to the Subcontractor's Offer**" means the completed sections entitled C1.2.2 Appendix to Tender: Contract Data – Information provided by the Contractor and C1.2.3 Appendix to Tender: Contract Data – Information provided by the Tenderer."

"Contractor's Letter of Acceptance" means the Form of Acceptance as contained in part C1.1.2 of the Subcontract including any appended memoranda comprising agreements between and signed by both Parties to the Subcontract.".

"Letter of Subcontractor's Offer" means the Form of Offer as contained in part C1.1.1 of the Subcontract."

"**Subcontract Bill of Quantities** shall also mean the Pricing Schedule as contained in Part C2 of the Subcontract"

"**Subcontract Specification**" means that document entitled Scope of Works, as included in the Subcontract, and any additions and modifications to the Scope of Works in accordance with the Main Contract. Such document specifies the Works."

1.1.40 "Cost" as stated under Main Contract Sub-Clause 1.1.4.3.

1.1.41 "Target Area" means the geographic area defined in the Main Contract's Contract Data for Targeted Labour and which typically are:

a. one or more Provinces;
b. one or more Metropolitan or District Municipalities;
c. one or more Local Municipalities;
d. one or more Wards that are predominantly located within an area and within a predefined radius of the construction activity;
e. one or more of the areas listed in the definition of Designated Groups.

1.1.42 "Targeted Enterprise" is an entity to which the Contractor subcontracts a percentage of the contract value as a condition of contract and which is:

j. an EME or QSE which is at least 51% owned by black people;
k. an EME or QSE which is at least 51% owned by black people who are youth;
l. an EME or QSE which is at least 51% owned by black people who are women;
m. an EME or QSE which is at least 51% owned by black people with disabilities;
n. an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships;
o. a cooperative which is at least 51% owned by black people;
p. an EME or QSE which is at least 51% owned by black people who are military veterans; or
q. more than one of the categories referred to in paragraphs a to g; and
r. which is tax and COID compliant.

1.1.43 "**Targeted Labour**" means Persons:.

a. who are employed by the Contractor or a subcontractor in the performance of the Main Contract; and
b. whose monthly earnings are derived from hours worked for a fixed hourly rate which is adjusted from time to time by legislation (as a statutory minimum) and the Contractor's or subcontractor's employment policies; and

c. permanently reside in the Target Area(s) or who are recognized as being residents of the Target Area(s) based on identification and association with, and recognition by, the residents of the Target Area(s); and
d. who are defined as a Target Group in the Main Contract's Contract Data.

1.1.44 "Subcontract's Base Date" means the date 28 days prior to the latest date for submission of the subcontract tender.

1.1.45 "**A day"** means a calendar day, except for any extension of time that is granted under Sub-Clause 8.4 [*Extension of Subcontract Time for Completion*], in which case a "day" means a working day. A **"year"** means 365 calendar days.

1.1.46 "A working day" means a day that is not listed as a Special non-working day.

1.5 Priority of Subcontract Documents

(1) the Forms of Offer and Acceptance;
(2) the Appendix to the Subcontractor's Offer;
(3) the Particular Conditions of Subcontract and Annexes, except any part of any Annex that is referred to elsewhere in this listed priority of Subcontract documents;
(4) the General Conditions of Subcontract;
(5) the Subcontract Specification;
(6) the Subcontract Drawings,
(7) the Standard Specifications,
(8) the Subcontract Bill of Quantities; and
(9) the Schedules and any other documents forming part of the Subcontract.

1.6 Notices, Consents, Approvals, Certificates, Confirmations, Decisions, and Determinations

*"*However, such notice, instruction, consent or request is not deemed to have been delivered by virtue of its appearance in the minutes of meetings*."*

1.7 Joint and Several Liability under the Subcontract

(b) No later than 14 days after the date of the Contractor's Letter of Acceptance these persons shall notify the other Party of their leader who shall have authority to bind that other Party and each of these persons; and*"*

1.9 Subcontract Agreement

"The Parties shall enter into a Subcontract Agreement when the Contractor issues to the Subcontractor the Contractor's Letter of Acceptance (see Particular Condition Sub-Clause 1.1.6). The Subcontract Agreement shall be in the form prescribed in the tender documents."

"If under the Main Contract, the Engineer does not consent to the Subcontract, upon notice from the Contractor of such non-consent:
(a) The Parties shall be discharged from further performance of the Subcontract, without prejudice to the rights of either Party in respect of any previous breach of the Subcontract;
(b) The Contractor shall immediately return the Subcontract Performance Guarantee (if applicable) to the Subcontractor; and
(c) Payment by the Contractor of the amounts and/or Costs as described in (a) to (d) of Sub-Clause 15.3 [*Payment after Termination of the Main Contract*] shall be due 28 days after the Parties' discharge from the Subcontract."

2.1 Subcontractor's Knowledge of Main Contract

"The Subcontractor shall treat the details of the Subcontract as private and confidential, except to the extent necessary to carry out obligations under it or to comply with applicable Laws. The Subcontractor shall not publish, permit to be published, or disclose any particulars of the Subcontract Works or the Main Works in any trade or technical paper or elsewhere without the previous agreement of the Contractor."

3.1 Access to the Site

"Right of access to and possession of the Site shall be on Subcontract Commencement Date except if otherwise detailed in the Subcontract Specification. The Contractor shall not be bound to make any part

of the Site available exclusively to the Subcontractor except those parts of the Site for those periods as expressly detailed in the Subcontract Specification."

6.4 Subcontractor's Representative

"The Contractor may require the Subcontractor's Representative to attend progress and/or contractual meetings with the Employer and/or the Engineer. If the Subcontractor's Representative attends any of these meetings, he shall be permitted to review the record of the meeting and, if he has not objected to this record within 7 days of its receipt, those minutes shall be deemed to be accurate and to be accepted by the Subcontractor's Representative."

6.5 Recruitment of Labour, Rates of Wages and Conditions of Labour

The Subcontractor shall utilise Labour and Targeted Labour from the Target Area(s) as stated in the Main Contract, utilising the Labour Database of Targeted Labour as stated in the Main Contract.

The Subcontractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Subcontractor shall pay rates of wages observe conditions which are not lower than the general level of wages and conditions observed locally by the employers whose trade or industry is similar to that of the Contractor. The conditions as stated in the Appendix to the Subcontractor's offer as well as shall also apply.

6.6 Working Hours

No work shall be carried out on Site on any special non-working day or within non-working hours of any day as stated in the Appendix to the Subcontractor's Offer unless:

(a) Otherwise stated in the Subcontract or Main Contract
(b) The Contractor gives consent; or
(c) The work is unavoidable or necessary for the protection of life or property or for the safety of the Works, in which case the Subcontractor shall immediately advise the Contractor.

6.7 Health and Safety

The Subcontractor shall be in good standing in terms of the Compensation for Occupational Injuries and Disease Act (COIDA) and have a letter as proof.

The Subcontractor shall be made conversant and comply with the Contractor's project specific Health and Safety plan, at all times.

The Subcontractor shall comply with all legal requirements pertaining to an employer, which include the responsibility to provide as far as reasonably practicable a safe and healthy working environment for his employees, as per Section 8 of the OHS Act safety plan/file + COVID-19 file to be submitted prior to commencement of the works

6.8 Subcontractor's Personnel

The Subcontractors' personnel shall be appropriately skilled and experienced in their respective trades or occupations. The Contractor may require the Subcontractor to remove (or cause to be removed) any person employed on the site or works, including the Subcontractors' representative, if applicable, who:

(a) Persists in any misconduct and lack of care
(b) Carries out duties incompetently or negligently
(c) Fails to conform with any provision of the Subcontract
(d) Persists in any conduct which is prejudicial to safety, health or protection of the environment
(e) Is found, based on reasonable evidence, to have engaged in corrupt, fraudulent, collusive or coercive practice; or
(f) Has been recruited from the Contractor's Personnel or the Employer's Personnel in breach of Sub-Clause 6.2 [*Persons in the Service of Others*].

The Subcontractor and/or his personnel will be provided with opportunities to receive training as contemplated in the Main Contract. The Subcontractor shall co-operate and ensure participation in all training provided.

6.9 Records of Subcontractor's Personnel and Equipment

The Subcontractor shall submit, to the Contractor, details showing the number of each class of Subcontractor's Personnel and of each type of Subcontractor's Equipment on the Site. Details shall be submitted each calendar month, in a form approved by the Contractor, until the Subcontractor has completed all the Subcontract Works."

8.1 Commencement of Subcontract Works

*In the 2nd line of the 2nd paragraph, after the words "*Commencement Date*", insert "*but within the period stated in the Appendix to the Subcontractor's Offer*"*

8.6 Suspension of Subcontract Works by the Contractor

"If Main Contract Sub-Clause 8.9 [*Consequences of suspension*] applies, then the Cost payable shall be the Suspension cost calculated in pay item B13.01 of the Subcontract Bill of Quantities (if applicable and as appropriate having regard to any other compensation which may already have been granted in respect of the circumstances concerned), else Cost payable shall be all expenditure reasonably incurred (or to be incurred) by the Subcontractor, whether on or off the Site, including overhead and similar charges, but does not include profit."

8.7 Subcontract Damages for Delay

These delay damages shall be as calculated from the rate stated in the Appendix to the Subcontractor's Offer, for every day between the relevant Subcontract Time for Completion and the date upon which completion of the Subcontract Works or Subcontract Section was achieved in accordance with Sub-Clause 10.1 [*Completion of Subcontract Works*]. However, the total amount due under this sub-clause shall be as determined between the Contractor, Engineer and Employer and shall not exceed the maximum amount of delay damages (if any) stated in the Appendix to the Subcontractor's Offer."

10.2 Taking-Over Subcontract Works

"The Employer may make use of any part of the permanent works prior to issue of a taking-over certificate for the Subcontract Works."

11.2 Subcontract Defects Notification Period

"If the Subcontract Works is taken-over by the Contractor before taking-over of the Main Works by the Employer in terms of Sub-Clause 10.3 [*Taking-Over by the Contractor*], then the Subcontract Defects Notification Period shall be from the date on which the whole of the Subcontract Works have been taken-over under Clause 10 [*Completion of and Taking-Over the Subcontract Works*] until expiry of the period as stated in the Appendix to the Subcontractor's Offer."

11.3 Subcontract Performance Certificate

Performance of the Subcontractor's obligations shall not be considered to have been completed until the Contractor has issued the Subcontract Performance Certificate to the Subcontractor, stating the date on which the Subcontractor has completed his obligations under the Subcontract. The Contractor shall issue the Subcontract Performance Certificate within 7 days of the expiry of the Subcontract Defects Notification Period, or as soon thereafter as the Subcontractor has supplied all the Subcontractor's Documents and completed and tested all the Subcontract Works, including remedying any defects.

After the Subcontract Performance Certificate has been issued, the provisions of the Main Contract Clauses 11.10 [*Unfulfilled Obligations*] and 11.11 [*Clearance of Site*] shall apply equally to the Subcontract.

14.1 The Subcontract Price

"Any quantities which may be set out in the Subcontract Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities:"

(a) of the Subcontract Works which the Subcontractor is required to execute, or
(b) for the purposes of Clause 12 [*Measurement and Evaluation*]

The Subcontractor shall submit to the Contractor within 14 days of receiving a written request, a full breakdown of all rates. The Contractor may take account of the breakdown when evaluating claims and making decisions."

14.6 Interim Subcontract Payments

"Provided that the Contractor shall be entitled to withhold or defer payment of all or part of any sums otherwise due in respect of a Subcontractor's monthly statement if a dispute arises or has arisen between the Subcontractor and the Contractor involving any question of measurement or quantities or any other matter included in the Subcontractor's monthly statement. Any payment so withheld or any other matter included in the Subcontractor's monthly statement. Any payment so withheld or deferred shall be limited to the extent that the amounts in the Subcontractor's monthly statement are the subject of a dispute. If the Contractor withholds or defers payment of any amount in a Subcontractor's monthly statement, then he shall notify the Subcontractor of his reasons for doing so as soon as is reasonably practicable but not later than the date when this payment would otherwise have become due. The Contractor's withholding or deferring payment of any amount in a Subcontractor's monthly statement shall not preclude the Subcontractor from including that amount in following Subcontractor's monthly statements."

*"*The Contractor shall pay the Subcontractor the full value as certified by the Engineer as being due to the Subcontractor in each Interim Payment Certificate, without any deduction for plant, equipment, materials or fuel supplied by the Contractor."

14.7 Payment of Retention Money under the Subcontract

"If the whole of the Subcontract Works have been taken-over under Sub-Clause 10.2 [*Taking-Over the Subcontract Works*] or Sub-Clause 10.3 [*Taking-Over by the Contractor*], the Contractor shall pay the Subcontractor the first half of the retention money under the Subcontract no later than 14 days after the whole of the Subcontract Works have been taken-over and all minor outstanding work have been completed. If a part of the Subcontract Works has been taken-over under Sub-Clause 10.2 [*Taking-Over the Subcontract Works*] or Sub-Clause 10.3 [*Taking-Over by the Contractor*], the Contractor shall pay the Subcontractor a proportion of the retention money under the Subcontract no later than 14 days after that part has been taken-over by the Contractor. This proportion shall be 50% of the proportion calculated by dividing the estimated subcontract value of the part by the estimated final Subcontract Price.

No later than 7 days after expiry of the Subcontract Defects Notification Period, the Contractor shall pay the Subcontractor the remaining portion of the retention money under the Subcontract. However, if any work remains to be executed under Clause 11 [*Defects Liability*], the Contractor shall be entitled to withhold payment of the estimated cost of this work until it has been executed and the Subcontract Performance Certificate issued."

14.8 Final Subcontract Payment

"Within 7 days after the Subcontractor has finally performed his obligations under the Subcontract, provided that 35 days have expired since submission by the Subcontractor of the Subcontractor's Final Statement, the Contractor shall pay to the Subcontractor the balance of the Subcontract Price finally due."

15.3 Payment after Termination of the Main Contract

"Payment by the Contractor of any of these amounts or Costs shall be due as soon as practicable after termination of the Subcontract.

If Main Contract Clause 19.7 [*Release from Performance under the Law*] applies to the Main Contract or the Main Contract has been terminated under Main Contract Sub-Clause 16.2 [*Termination by Contractor*] or Main Contract Sub-Clause 19.6 [*Optional Termination, Payment and Release*], and the Contractor receives payment from the Employer for any Subcontract Plant and/or materials, then the Subcontract Plant and/or materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Subcontractor shall place the same at the Employer's disposal."

15.5 Notice to Correct under the Subcontract

"The Notice shall:"
(a) describe the Subcontractor's failure;
(b) state the sub-clause and/or provisions of the Contract under which the Subcontractor has the obligation; and

(c) specify the time within which the Subcontractor shall remedy the failure, which shall be reasonable, taking due regard of the nature of the failure and the work and/or other action required to remedy it.

"The time specified in the Notice to Correct shall not imply any extension of Time for Completion."

17.3 Subcontract Limitation of Liability

Add the following additional clause references to the last sentence of the 1st paragraph, before the words "under Clause 15 [Termination of the Main Contract and Termination of the Subcontract by the Contractor]" :

" as specifically provided for in Sub-Clause 8.7 [*Subcontract Damages for Delay*]; Sub-Clause 17.4 [*Intellectual and Industrial Property Rights*]; and under"

Add the following new sub-clause:

The provisions of Main Contract Sub-Clause 17.5 [*Intellectual and Industrial Property Rights*] shall apply to the Subcontract."

17.4 Intellectual and Industrial Property Rights

The provisions of Main Contract Sub-Clause 17.5 [*Intellectual and Industrial Property Rights*] shall apply to the Subcontract."

20.4 Subcontract Disputes

Prior to referral of any dispute to the Subcontract DAB in terms of this Sub-Clause, the dispute shall first be referred to the Engineer in writing for its decision, with a copy to the other Party. The Engineer's decision shall be binding on both Parties unless and until it shall be revised by a Subcontract DAB decision in accordance with Sub-clause 20.6 [*Obtaining Subcontract DAB's Decision*]. Either Party shall have the right to refer a dispute to the Subcontract DAB after receipt of the Engineer's decision on the dispute. Provided that, unless either Party shall, within 21 days after his receipt of a decision by the Engineer, refer the dispute to the Subcontract DAB for a decision, he shall have no further right to dispute that decision or the part thereof not disputed in the said notice. "

"The Notice of Dispute shall be given as soon as practicable, and not later than 21 days after the Party became aware, or should have become aware, of the event or circumstance giving rise to the Dispute. The Notice of Dispute shall refer to the relevant clause(s) in the subcontract agreement. If the Party fails to give notice, he shall have no further right to dispute the event or circumstance, or the part thereof not disputed in the said notice.

"Where the subject of the Subcontractor dispute is referred to the Main Contract DAB, the Contractor shall use all reasonable endeavours to pursue the dispute on the Contractor's and the Subcontractor's behalf and for both the Contractor's and the Subcontractor's benefit, and shall regularly keep the Subcontractor informed of the progress of these endeavours. The Contractor shall as soon as practicable but not later than 7 days of its receipt of the Main Contract DAB decision, notify the Subcontractor of this decision. Unless the Subcontractor notifies the Contractor of his dissatisfaction with the Main Contract DAB's decision within 7 days of his receipt of the Contractor's notice, this decision shall be deemed to be accepted by the Subcontractor. This decision shall be binding on both Parties to the Subcontract unless and until it shall be revised in an amicable settlement as described in Sub-Clause 20.6 [*Obtaining Subcontract DAB's Decision*], or an arbitral award in accordance with Sub-Clause 20.7 [*Subcontract Arbitration*]."

20.5 Appointment of the Subcontract DAB

"Where the subject of the Subcontract dispute is not referred to the Main Contract DAB, and the decision by the Engineer on a dispute made under Sub-clause 20.4 [*Subcontract Disputes*], is referred to the Subcontract DAB, the dispute between the Contractor and the Subcontractor shall be decided by a Subcontract DAB. Where a Main Contract DAB is appointed under the Main Contract, the Subcontract DAB shall comprise of the members of the Main Contract DAB."

"Where a Main Contract DAB is not appointed under the Main Contract…"

"and the provisions relating to payment shall not apply hence the Party that referred the dispute to the Subcontract DAB shall be responsible for paying the remuneration of the Subcontract DAB."

20.6 Obtaining Subcontract DAB's Decision

"The appointed Subcontractor's DAB shall have the freedom to first mediate between the parties in an effort to settle the dispute by mutual agreement before adjudicating the matter as is provided for in these conditions and give a decision in the dispute that has been referred."

20.7 Subcontract Arbitration

"Unless settled amicably, any Subcontractor dispute in respect of which the Main Contract DAB's decision or Subcontract DAB's decision (if any) has not become final and binding shall be finally settled by means of Arbitration. The Arbitration shall be conducted under the provision of the South African law as it applies to Arbitration (Act 42 of 1965)."

ANNEX A: PARTICULARS OF THE MAIN CONTRACT

PART A (Subcontract Sub-Clause 2.1)		
1.	**PARTIES**	
	Name and address of Employer:	The South African National Roads Agency SOC Limited (SANRAL) 48 Tambotie Avenue Val De Grace Pretoria, 0184
	Legal form of Employer:	Company
	Name and address of Engineer:	Bosch Ulwazi (Pty) Ltd 1 Holwood Park, 5 Canegate Road, La Lucia Ridge Office Estate, 4320
	Legal form of Engineer:	Company
	Name and address of Contractor:	**RAUBEX KZN (PTY) LTD** **Procurement Manager** **10 Westgate Pl,** **Tollgate,** **Pinetown,** **3610**
	Legal form of Contractor:	Company
2.	**MAIN CONTRACT COMMENCEMENT DATE**	
	Main Contract Commencement Date:	***25 February 2021***
3.	**TIME FOR COMPLETION**	
	Times for Completion under the Main Contract	
	(b) Section Times for Completion:	15 months including Mobilisation Period
	(c) Time for Completion:	15 Months
	(d) Programme	As per the main Contract
4.	**DESCRIPTION OF WORKS UNDER THE MAIN CONTRACT**	
	(a) The Site is Located:	National Route 2 Sections 21 and 22 from Izingolweni to Murchison KM 101.1(N2/21) to KM 18.4 (N2/22)
	(b) The Main Works Comprise:	Periodic maintenance of the national route N2
5.	**CONDITIONS OF THE MAIN CONTRACT**	
	The Conditions of the Main Contract consist of the FIDIC Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, First Edition 1999, published by the International Federation of Consulting Engineers (FIDIC) together with the Particular Conditions of the Main Contract. The Appendix to Tender of the Main Contract and the Particular Conditions of the Main Contract is attached to this Annex A.	

6.	**CONFIDENTIAL PARTS OF THE MAIN CONTRACT**	
	The following parts of the Main Contract will be confidential between the Employer and the Contractor, and shall not be made available for inspection to the Subcontractor	C2.2 Pricing Schedule (Incorporating SBD3) C2.3 Summary of Pricing Schedule
PART B (Subcontract Sub-Clause 2.2)		
	Exclusions	***Nil***

ANNEX B: SCOPE OF SUBCONTRACT WORKS AND SCHEDULES OF SUBCONTRACT DOCUMENTS

1.	**Scope of Subcontract Works**	
	The Scope of Subcontract Works is contained in (or referred to in):	Part C3: Scope of Works Part C4: Site Information
2.	**Schedule of Technical documents for the Subcontract Works**	
	The Technical documents for the Subcontract Works are contained in (or referred to in):	Part C3: Scope of Works Part C4: Site Information

ANNEX C: TAKING-OVER BY THE CONTRACTOR AND SUBCONTRACT BILL OF QUANTITIES

1.	**Taking-Over by the Contractor (Sub-Clause 10.3)**	
	Provided completion of the Subcontract Works has been achieved in accordance with sub-clause 10.1 [*Completion of Subcontract Works*], the Subcontractor may apply by notice to the Contractor for the Contractor to take-over the Subcontract Works. The Contractor shall, within 7 days after receiving the Subcontractor's application: (i) Issue a certificate to the Subcontractor verifying the taking-over of the Subcontract Works, and stating the date of such taking-over, or (ii) Reject the application, giving reasons and specifying the work required to be done by the Subcontractor to enable a taking-over certificate to be issued. The Subcontractor shall then complete this work before issuing a further notice under this sub-clause. If the Contractor fails to either issue a taking-over certificate or to reject the Subcontractor's application within the period of 7 days, and if the Subcontract Works have been completed in accordance with the Subcontract, these works shall be deemed to have been taken-over on the last day of the period of 7 days.	
2.	**Subcontract Bill of Quantities and/or schedule of prices (if any) (Sub-Clause 1.1.18)**	
	The subcontract Bill of quantities is contained in Part C2 Pricing Data	

ANNEX D: EQUIPMENT, TEMPORARY WORKS, FACILITIES, AND FREE-ISSUE MATERIALS TO BE PROVIDED BY THE CONTRACTOR (Sub-Clauses 4.1, 7.1 & 7.2)

1.	**Equipment, Temporary Works, Facilities, and Free-issue Materials**	
	The Equipment, Temporary Works, Facilities and Free-Issue Materials listed shall be provided by the Contractor to the Subcontractor	No free issue materials will be supplied on this project
2.	**Common Use of Facilities**	
	Access to the work areas within the Site	The Sub Contractor will be allocated a temporary laydown facility that is to be maintained for the duration of the contract and kept free of litter and refuse
	Transport of local labour to work areas within the Site	The Sub-Contractor will be responsible for the transportation of his labour. All material will be delivered to the nearest lay down facility
	Common camp facilities, including messing, medical, security, safety, recreation, laundry, house-keeping, electricity, water, sewage, waste disposal, and other general camp services	The Sub-Contractor will share the Main Contractorms facilities, where these do not exist, the Sub-Contractor will be required to provide his own.
3.	**Use of Temporary Works, Equipment and Facilities by Subcontractor at no charge**	
	Temporary Works (including Traffic Accommodation)	The Main Contractor will provide traffic accommodation
	Contractor's Equipment and vehicles	The Sub-Contractor is to provide his own as listed in Form B2
	Facilities	Laydown facilities shall be provided.
4.	**Use of Temporary Works, Equipment and Facilities by Subcontractor to be charged**	
	Temporary Works (including Traffic Accommodation)	Nil
	Contractor's Equipment and vehicles	Should the Sub-Contractor require plant and equipment he shall order these directly from the Main Contractor and will be invoiced accordingly, should this not be paid on receipt of their payment, a cession will be signed and garnished from his next certificate.
	Facilities	Nil

5.	Free Issue Materials

Not Applicable to this contract

Note to Tenderers: These free issue items are dependent on the Work Package involved.

ANNEX E: INSURANCES (Sub-Clauses 18.1 & 18.2)

1.	**Insurances to be effected and maintained by the Subcontractor**	
	The Insurances listed shall be effected and maintained by the Subcontractor	The subcontractor will be covered under the main contract for the Subcontract Works.
2.	**Insurances to be effected and maintained by the Contractor under the Main Contract that relate to the Subcontract Works**	
	The Insurances listed shall be effected and maintained by the Contractor	The Contractor is to provide insurance for the Works.
3.	**Insurances to be effected and maintained by the Employer under the Main Contract that relate to the Subcontract Works**	
	The Insurances listed shall be effected and maintained by the Employer	The Employer will not effect or maintain any insurance that relate to the Subcontract Works.

ANNEX F: SUBCONTRACT PROGRAMME (Sub-Clause 8.3)

A.	**Initial Subcontract Programme**	
	Form and detail of the programme	The form and detail of the programme for the execution of the Subcontract Works shall fully comply with the programming and reporting requirements of the Main Contract and, in any case, shall: a. be prepared in sufficient detail to ensure the adequate planning, execution and monitoring of the Subcontract Works; b. use the programming software specified in the Main Contract; c. take due account of the Subcontract Time for Completion; d. identify all relevant activities including those that relate to design, manufacture, procurement, and on Site works; e. show earliest and latest start and finish dates for each work activity; f. identify when and what information, drawings, materials, equipment, facilities, and/or temporary works are required from the Contractor, the Engineer and/or the Employer; g. identify when and what approvals, consents, and/or certificates are required from the Contractor, the Engineer and/or the Employer; h. identify the date(s) and location(s) within the Site that access is required to execute (parts of) the Subcontract Works; i. identify holiday periods; j. identify key delivery dates of Subcontract Plant and materials k. identify dates by which work will be ready for inspection and/or testing; l. logically link all activities; m. identify where the critical path(s) lie(s); n. identify all float; o. include sufficient flexibility in order to make adequate adjustments to allow for interfacing the Subcontractor's activities with the Contractor and other contractors working on the Site; p. allow for weather conditions which are at the Subcontractor's risk (if any), and other Subcontractor's time risks; and q. be supported by a schedule giving sufficient details of the Subcontractor's resource requirements in terms of manpower, work rates, items of plant, equipment and materials for each work activity to justify the activity duration shown in the programme.
	Acceptance	The Contractor shall within 14 days of receiving the initial programme respond by either stating that this initial programme complies with the Subcontract, in which case it shall become the Subcontract Programme; or rejecting this initial programme, giving sufficiently detailed and cogent reasons to enable the Subcontractor to revise the initial programme in a timely manner. If the Subcontractor receives no response from the Contractor within 14 days of submitting the initial programme, it shall become the Subcontract Programme. If the Contractor responds stating that the initial programme fails (to the extent stated) to comply with the Subcontract, the Subcontractor shall submit a revised initial programme within 7 days of receipt of the Contractor's response, taking due account of the reasons given by the Contractor. The Contractor shall within 7 days of receiving this revised initial programme, respond by either stating that it complies with the Subcontract in which case it shall become the Subcontract Programme; or stating that the initial programme fails (to the extent stated) to comply with the Subcontract, giving sufficiently detailed and cogent reasons to enable the Subcontractor to further revise the initial programme in a timely manner.

B.	**Updating the Subcontract Programme**	
	Updating	The Subcontract programme shall be updated and submitted to the Contractor no later than 7 days from the date that the Subcontractor's initial programme became the Subcontract Programme and, in any case, within 3 days of the occurrence of any of the following: a. the Subcontractor changing his method(s) and/or sequencing of work and/or duration of activities and/or allocation of resources; b. any delay event experienced by the Subcontractor in his execution of the Subcontract Works of whatsoever cause which impacts the critical path or, if there is more than one critical path, any of the critical paths; c. notification from the Contractor of any delay event which has occurred, or specific probable future events or circumstances, which may adversely affect the Subcontractor's work, increase the Subcontract Price or delay the execution of the Subcontract Works; d. the grant by the Contractor of an extension of the Subcontract Time for Completion; e. receipt of a Contractor's Instruction regarding the programming and/or sequencing of the Subcontract Works; and f. receipt of notification from the Contractor that the actual progress of the Subcontract Works is too slow to complete within the Subcontract Time for Completion and/or does not conform to the Subcontract Programme. The updated programme shall show modifications to the Subcontract Programme necessary to ensure completion of the Subcontract Works within the Subcontract Time for Completion.
	Acceptance	The Contractor shall within 7 days of receiving the updated programme respond by either stating that it complies with the Subcontract, in which case it shall become the Subcontract Programme; or stating that it fails (to the extent stated) to comply with the Subcontract, giving sufficiently detailed and cogent reasons to enable the Subcontractor to revise it in a timely manner. If the Subcontractor receives no response from the Contractor within 7 days of submitting the updated programme, it shall become the Subcontract Programme. If the Contractor responds stating that the updated programme fails (to the extent stated) to comply with the Subcontract, the Subcontractor shall submit a revised updated programme within 7 days of receipt of the Contractor's response, taking due account of the reasons given by the Contractor. The Contractor shall within 7 days of receiving this revised updated programme, respond by either stating that it complies with the Subcontract, in which case it shall become the Subcontract Programme; or stating that it fails (to the extent stated) to comply with the Subcontract, giving sufficiently detailed and cogent reasons to enable the Subcontractor to further revise the updated programme in a timely manner.
	Subcontract duration	Thereafter, for the duration of the Subcontract Works, the Subcontractor shall update the programme and each updated programme shall be subject to the requirements of this Annex. The Subcontractor shall not delay any work whilst awaiting a response from the Contractor in respect of any updated or revised updated Subcontract programme. Provided that any response by the Contractor in respect of any programme submitted by the Subcontractor that relates to the Subcontract Works shall not be taken as: i) conferring any right on the Subcontractor other than those set out in the Subcontract, or ii) any waiver of the Contractor's rights or the Subcontractor's obligations under the Subcontract.

C1.2.2 APPENDIX TO TENDER: CONTRACT DATA - INFORMATION PROVIDED BY THE CONTRACTOR

1. **This form is the equivalent of the Appendix to the Subcontractor's Offer as defined in Sub-Clause 1.1.3 of the FIDIC Conditions of Subcontract, 2011.**

2. **Subcontract clause numbers (SCl No.) refer to the FIDIC Conditions of Subcontract, 2011. The prefix PCC refers to an amendment or addition in the Particular Conditions of Contract.**

SCl No	Item	Data
1.1.4	Contractor	means **RAUBEX KZN (PTY) LTD** Physical address: **10 Westgate Pl,** **Tollgate,** **Pinetown,** **3610**
1.1.7	Contractor's CPG Representative	C and PM Consulting (Pty) Ltd PO Box 2074 Hillcrest 3650 Cell: 081 470 5442 Email:helpdesk.murchison@cpmc.co.za
1.1.28	RAUBEX-CPG 212-2018/1 WP 1-4	Time for Completion 5 Months.
1.1.31	Subcontract Time for Completion	5 months from the Commencement Date
1.4	Subcontract Communications	Communications between the parties shall be from the Subcontractor through to the Contractor. The addresses for communication with the Contractors Representative shall be: C and PM Consulting (PTY) Ltd Physical address: 29 Galloway Road Hillcrest 3650 Postal address: P o Box 2074 Hillcrest Tel:N/A Cell: 081 470 5442 Fax No : N/A E-mail: helpdesk.murchison@cpmc.co.za
4.2	Subcontract Performance Security	Not applicable for Targeted Enterprise Subcontractors

PCC 6.5	Rates of Wages and Conditions of Labour	The Subcontractor shall be registered with the Bargaining Council for the Civil Engineering Industry (Government Notice R.490 – Part III in Government Gazette No. 37750) and rates for Wages and Conditions of Labour agreed by the Bargaining Council for the Civil Engineering Industry shall apply to the Subcontractor except where a specific industry publishes its own Wage Rates and Conditions of Labour.
PCC 6.6	Working Hours	Special non-working days are: a) all designated public holidays (including all foreseeable statutory declared election days) (b) the annual shut-down period between December and January (c) day before Easter Weekend (d) day of State school term closure and day prior to State school term start (e) other non-working days and restricted working hours specified in section B1200 in the Main Contract as follows: (f) Sundays (g) between sunset and sunrise
PCC 8.1	Subcontract Commencement Date	As stated in Clause C1.1.2 Form of Acceptance.
PCC 8.1	Period in which the Subcontract Work is to commence	Within 7 days of the Subcontract Commencement Date
PCC 8.7	Delay Damages	R500/day based on 0.1% of Contract Value
PCC 8.7	Maximum amount of Delay Damages	Up to 5% of the Accepted Subcontract Price
PCC 11.2	Subcontract Defects Notification Period	6-months.
13.5	Subcontract Adjustments for Changes in Cost	No CPA will be applicable to this Contract

14.2	Total Subcontract Advance Payment	0% of Accepted Subcontract Price
14.2	Number, Timing and proportions of instalments of advance payment	Not applicable
PCC 14.6	Percentage of Retention	5% of the Value of Completed Work
PCC 14.6	Limit of Retention Money	5% of the Subcontract Price
14.11	Subcontract Currencies of Payment	South African Rand (ZAR)
PCC 20.5	Appointment of the Subcontract DAB	Where a Main Contract DAB is appointed under the Main Contract, the Subcontract DAB shall comprise of the same members of the Main Contract DAB. Where a Main Contract DAB is not appointed under the Main Contract, the Subcontract DAB shall comprise of 1 (one) member only

C1.2.3 APPENDIX TO TENDER: CONTRACT DATA – INFORMATION PROVIDED BY THE TENDERER

Note to Tenderer:
This form is the equivalent of the Appendix to the Subcontractor's Offer as defined in Sub-Clause 1.1.3 of the FIDIC Conditions of Subcontract, 2011

1. FIDIC CONDITIONS OF SUBCONTRACT

1.a Clause 1.1.34: Subcontractor

The subcontractor is: .....

1.b Clause 1.4: Subcontract Communications

Communications to the Subcontractor shall be delivered, sent or transmitted to the following:

Physical address: .....

.....

.....

Telephone: .....

Facsimile: .....

E-mail: .....

1.c Clause 1.1.39: Subcontractor's Representatives

The authorized and designated representative of the Subcontractor is:

Name: .....

SIGNED BY TENDERER: .....

PART C2: PRICING DATA

PART C2 PRICING DATA

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C2.1 PRICING INSTRUCTIONS
C2.**ERROR! BOOKMARK NOT DEFINED.**
C2.2 PRICING SCHEDULE (INCORPORATING SBD3) C2.5
(PROVIDED ON COMPACT DISC)
C2.3 SUMMARY OF PRICING SCHEDULE C2.29

C2.1 PRICING INSTRUCTIONS

C2.1.1 Measurement and payment shall be in accordance with the relevant provisions of the Standard Specifications as amended in the Scope of Works.

C2.1.2 The units of measurement described in the Bill of Quantities are metric units. Abbreviations used in the Bill of Quantities are detailed in the Standard Specifications.

C2.1.3 For the purposes of the Bill of Quantities, the following words shall have the meanings hereby assigned to them.

Unit:	The unit of measurement for each item of work as defined in the Standard Specifications or the Scope of Works.
Quantity:	The number of units of work for each item.
Rate:	The payment per unit of work for which the Subcontractor tenders to do the work.
Amount:	The product of the quantity and the rate tendered for an item.
Lump Sum:	An amount tendered for an item, the extent of which is described in the Bill of Quantities, the Scope of Work or elsewhere, but of which the quantity of work is not measured in units.
Prime cost:	Is a specific type of Provisional Sum where payment is made on the production of invoices showing the cost price of the implementation or installation of the service required. Services rendered in this manner carry a mark-up for which a rate is offered at tender stage to cover all the Subcontractor's handling, supervision and liability costs in providing the item or services. Any percentage adjustment or lump sum mark-up against the Prime cost for handling fee, profits, etc. shall not be negative.
Provisional Sum:	A sum (if any) which is specified in the contract as a provisional sum, for the execution of any part of the works or the supply of plant, materials or services under Sub-Clause 13.5 (*Provisional sums*) of the Main Contract. Any percentage adjustment or lump sum mark-up against the Provisional Sum for handling fee, profits, etc. shall not be negative

C2.1.4 Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

C2.1.5 It will be assumed that prices included in the Bill of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org,za or www.iso.org for information standards).

C2.1.6 The prices and rates in the Bill of Quantities are fully inclusive prices for the work described under the items, and include all duties, taxes (except Value Added Tax) and other levies payable by the Contractor. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities and obligations set forth or implied, as well as overhead charges and profit. These prices will be used as a basis for assessment of payment for additional work that may have to be carried out.

C2.1.7 Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered such items.

C2.1.8 An item against which no price is entered will be considered to be covered by the other prices or rates in the Pricing Schedule. A single lump sum will apply should a number of items be grouped together for pricing purposes.

C2.1.9 The quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bill of Quantities.

C2.1.10 Reasonable compensation will be received where no pay item appears in the Bill of Quantities in respect of work required in terms of the Contract and which is not covered in any other pay item.

C2.1.11 The short descriptions of the items of payment given in the Bill of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.

C2.1.12 The item numbers appearing in the Bill of Quantities refer to the corresponding item numbers in the Standard Specifications.

C2.1.13 If the pricing schedule is provided electronically in excel format and in hard copy or pdf, in the event of any discrepancy between the signed printed hard copy or pdf copy, and the electronically submitted copy in excel, the tender rates in the signed hard copy or pdf copy will govern the item numbers and description of the pdf document For all addenda issued relating to the pricing schedule, the item numbers, description and quantities of the issued document will govern.

C2.2 PRICING SCHEDULE (INCORPORATING SBD3) (PROVIDED ON COMPACT DISC)

WORK PACKAGE 1
RAUBEX-CPG-3CE-212-2018/1 WP 1

RAUBEX-CPG-3CE-212-2018/1 WP 1

N2 - SANRAL N.002-212-20181 - PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22) WORK PACKAGE 1

SECTION 1300:CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

Item	Description	Unit	Bill quantity	Rate	Amount
1300	**CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS**				
B13.01	The contractor's general obligations				
	(a) Fixed obligations	L/Sum	1		
	(c) Time-related obligations				
	(i) Execution of the works	month	3		
	(d) Health and safety obligation	month	3		
	(i) NOTE: If the combined tendered total for subitems (a), (b) and (c) exceeds 10% of the tender sum (excluding the contingent sum, CPA and VAT) the tenderer shall comply with requirements of Form C1 "CONTRACTOR's ESTABLISHMENT ON SITE"				
Total carried forward to summary					

RAUBEX-CPG-3CE-212-2018/1 WP 1

N2 - SANRAL N.002-212-20181 - PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22) WORK PACKAGE 1

SECTION 3900: PATCHING AND REPAIRING EDGE BREAKS

Item	Description	Unit	Bill quantity	Rate	Amount
4200	**ASPHALT BASE AND SURFACING**				
B42.11	Asphalt constructed for rehabilitation purposes in accordance with the provisions of sub-sub-clause 4213(f)(ii) and 4213(f)(iii)				
	(a) Asphalt base, using asphalt surfacing mix (laid in layers not exceeding 50mm), using continuously graded medium grade asphalt, 35/50 pen bitumen, 10mm max aggregate	t	100		
	(b) Asphalt surfacing, including bridge decks, (maximum 50mm thickness), using continuously graded medium grade asphalt, 35/50	t	1008		
42.04	Tack coat of 30% stable-grade emulsion	l	10000		
B42.08	100mm cores in asphalt paving	No.	10		
42.15	Application of prime coat and/ or tack coat to the edges of a layer	l	70		
Total carried forward to summary					

RAUBEX-CPG-3CE-212-2018/1 WP 1

N2 - SANRAL N.002-212-20181 - PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22) WORK PACKAGE 1

Summary of Sections

Section	Description	Amount R
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
4200	ASPHALT BASE AND SURFACING	
	Total	

WORK PACKAGE 2
RAUBEX-CPG-3CE-212-2018/1 WP 2

RAUBEX-CPG-3CE-212-2018/1 WP 2

N2 - SANRAL N.002-212-20181 - PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22) WORK PACKAGE 2

SECTION 1300:CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

Item	Description	Unit	Bill quantity	Rate	Amount
1300	**CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS**				
B13.01	The contractor's general obligations				
	(a) Fixed obligations	L/Sum	1		
	(c) Time-related obligations				
	(i) Execution of the works	month	3		
	(d) Health and safety obligation	month	3		
	(i) NOTE: If the combined tendered total for subitems (a), (b) and (c) exceeds 10% of the tender sum (excluding the contingent sum, CPA and VAT) the tenderer shall comply with requirements of Form C1 "CONTRACTOR's ESTABLISHMENT ON SITE"				
Total carried forward to summary					

RAUBEX-CPG-3CE-212-2018/1 WP 2

N2 - SANRAL N.002-212-20181 - PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22) WORK PACKAGE 2

SECTION 3900: PATCHING AND REPAIRING EDGE BREAKS

Item	Description	Unit	Bill quantity	Rate	Amount
4200	**ASPHALT BASE AND SURFACING**				
B42.11	Asphalt constructed for rehabilitation purposes in accordance with the provisions of sub-sub-clause 4213(f)(ii) and 4213(f)(iii)				
	(a) Asphalt base, using asphalt surfacing mix (laid in layers not exceeding 50mm), using continuously graded medium grade asphalt, 35/50 pen bitumen, 10mm max aggregate	t	100		
	(b) Asphalt surfacing, including bridge decks, (maximum 50mm thickness), using continuously graded medium grade asphalt, 35/50	t	1008		
42.04	Tack coat of 30% stable-grade emulsion	l	10000		
B42.08	100mm cores in asphalt paving	No.	10		
42.15	Application of prime coat and/ or tack coat to the edges of a layer	l	70		
Total carried forward to summary					

RAUBEX-CPG-3CE-212-2018/1 WP 2

N2 - SANRAL N.002-212-20181 - PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

Summary of Sections

Section	Description	Amount R
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
4200	ASPHALT BASE AND SURFACING	
	Total	

C2.3 SUMMARY OF PRICING SCHEDULE WORK PACKAGE 1 RAUBEX CPG 212-2018/1 WP 1

SCHEDULE A:	ASPHALT BASE AND SURFACING.....	R .....
(from page C2.09)		
VALUE ADDED TAX:		
15% of Subtotal	.....	R .....
TOTAL CARRIED TO C.1.1.1 : FORM OF OFFER		R .....

C2.4 SUMMARY OF PRICING SCHEDULE WORK PACKAGE 1 RAUBEX CPG 212-2018/1 WP 2

SCHEDULE A:	ASPHALT BASE AND SURFACING.....	R .....
(from page C2.13)		
VALUE ADDED TAX:		
15% of Subtotal	.....	R .....
TOTAL CARRIED TO C.1.1.1 : FORM OF OFFER		R .....

PART C3: SCOPE OF WORKS

PART C3 SCOPE OF WORKS

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PART C3: SCOPE OF WORKS

C3.1 GENERAL SPECIFICATION

C3.1.1 SCOPE

This section provides the description of the project and the general requirements for executing the subcontract work. The work required is the construction of Clear and Grub, Shoulder Construction, Edge Beams and Guard Rails along the National Route 2 Sections 21 and 22 from Izingolweni to Murchison KM 101.1(N2/21) to KM 18.4 (N2/22).

It is a requirement of the Main Contract for the Contractor to facilitate the Subcontractor development of targeted enterprises as a contract participation goal by means of subcontracting some of the scheduled work section(s) to targeted enterprises as subcontractors.

C3.1.2 DESCRIPTION OF THE WORKS

C3.1.2.1 Description of site

(a) Location of site is on the National Route 2 Sections 21 and 22 from Izingolweni to Murchison KM 101.1(N2/21) TO KM 18.4 (N2/22)

The general locality of the site is indicated on the locality plan bound in the back of this volume.

The term “Site” as defined in the Main Contract in terms of Clause 1.1.6.7 of the FIDIC Conditions of Contract for Construction, 1999 and is bound by the limits of construction as shown in the drawings or the title of the project and extends to also include the following:

- Areas outside the construction zone areas where accommodation of traffic is placed.
- All borrow pits defined in the applications approved by the relevant Department of Minerals and Energy.
- All haul roads constructed by the Contractor for purposes of access.
- Any non-adjacent sites specified in the contract documentation.
- The Contractor’s and his subcontractors camp sites

The portion of the site applicable to this subcontract will comprise:

- The section of National Route *Sections 21 and 22 from Izingolweni to Murchison KM 101.1(N2/21) to KM 18.4 (N2/22)*

(b) Access to the site

Vehicular Access to the site shall be from established interchanges, intersections and approved accesses.

C3.1.2.2 Nature of Subcontract work

The description of the project contained in this section is merely an outline of the Subcontract works and shall not limit the work to be carried out by the Subcontractor under this Subcontract. Approximate quantities of each type of work to be carried out in accordance with the Subcontract documents are listed in the Bill of Quantities bound in this volume.

The nature of work to be carried out under this Subcontract includes:

- Clearing & Grubbing for Hand work.
- Edge Build Up.
- Reconstruction of V drain.
- Shoulder Construction.
- Edge Beams.
- Guard Rails.

C3.1.3 DRAWINGS

A set of construction A3 Drawings will be issued.

C3.1.4 CONSTRUCTION IN CONFINED AREAS

Not Applicable.

C3.1.5 SUBCONTRACTOR'S CAMP SITE

The Contractor will provide shared facilities as detailed in Annex D of the Contract Data of the Conditions of Subcontract.

C3.1.6 ADDITIONAL REQUIREMENTS FOR CONSTRUCTION ACTIVITIES

In addition to the requirements specified in the Standard Specifications, the Subcontractor shall adhere to the following requirements.

C3.1.6.1 Accommodation of traffic

The Contractor will provide Traffic Accommodation as detailed in Annex D of the Contract Data of the Conditions of Subcontract.

C3.1.6.2 Environmental requirements

Trees and shrubs established in landscaped areas of interchanges and in the road reserve may under no circumstances be disturbed without specific instruction from the Contractor for their removal. Trees and shrubs inadvertently destroyed by the Subcontractor shall be replaced with the equivalent at the Subcontractor's own cost.

Disposal of any bituminous-based material shall only be at an approved location and by means of an approved method, arranged beforehand with the Contractor. Bituminous binders shall not be disposed of on the Site but shall be returned to the supplier for disposal.

C3.1.6.3 Dayworks

Not Applicable.

C3.1.7 ALLOWANCE FOR OTHER CONTRACTORS AND ACCOMMODATION OF OTHER CONTRACTS

Access to work areas and requirement for allowance of other contractors within the work areas is detailed in Annex D of the contract Data of the Conditions of Subcontract.

C3.1.8 PROGRAMME, RESTRICTION AND COMPLETION OF ACTIVITIES

This clause covers matters relating to the programme of work, restriction on certain activities, completion and responding time of specified activities, and compliance with the specifications.

C3.1.8.1 Programme

The Time for Completion of the Works is specified in the Appendix to the Subcontractor's Offer.

The requirements of the Subcontract programme are specified in Annex F of the Contract Data of the Conditions of Subcontract.

The Contractor will determine the extent and frequency of the work to be executed in terms of the subcontract, as certain activities are dependent upon the climatic conditions encountered during the period of the subcontract and on progress of the Contractor or other subcontractors.

The frequency and commencement period of some of the key activities, as instructed by the Contractor are scheduled in Table C3.1.8/1.

TABLE C3.1.8/1: FREQUENCY AND COMMENCEMENT PERIOD OF ACTIVITIES

Activity	Frequency	Start period

C3.1.8.2 Restriction on activities

Work activities will be restricted on days or hours indicated in clause 6.6 of the Contract Data of the Conditions of Subcontract .and the Subcontractor must allow for these restrictions in his programme and no extension of time or claims in this regard will be considered.

C3.1.8.3 Completion time of specified activities

Generally, the activities covered by this subcontract will be on a continuous basis. However, certain specified activities are considered to be of a non-continuous nature and multiple establishments will not be required.

C3.1.9 OCCUPATIONAL HEALTH AND SAFETY

In terms of the Construction Regulation 5(1)(b) of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993), the South African National Roads Agency SOC Limited, as the Employer, is required to compile a specification on health and safety for the project. The Contractor will furnish the Subcontractor with the applicable specification and his Health and Safety plan.

The Method Statement shall be provided by the Contractor.

C3.1.10 INTEGRATED TRANSPORTATION INFORMATION SYSTEM (FOR INFORMATION PURPOSES)

The Employer has developed a comprehensive information management tool called ITIS (Integrated Transportation Information System) to address all facets of its strategic and tactical planning, design, construction, and maintenance of the entire road network. This provides support for the management tasks of the Employer and to allow the personnel to make technical decisions more quickly and efficiently.

ITIS is an integrated approach to the sharing and inter-relating of technical performance information for the Employer and relies on people following procedures to populate system with data. ITIS currently consist of the following platforms:

- ITIS Web – Web enabled portal providing online access to various functions, workflows and reports.

- ITIS Desktop – Offline data capture tool enabling the capture of information offline, validation and then synchronisation of data with the ITIS database.

- ITIS Mobile – Application (Android 4.3 or later and IOS 6 or later) that allows the in-field capture of information using a smart phone or tablet (must have camera and GPS), validation and then synchronisation of data with the ITIS database.

The Employer then has several ITIS modules running on any of the above ITIS platforms which affect the Contractor, who will need to use these modules to perform certain procedures and to provide required information. The current modules applicable and their description are as follows:
(i) Project Information Module – employment and training data.

The Subcontractor will be required to supply relevant information to the Contractor to enable compliance with his obligations.

C3.1.12 CONTRACTOR SUPPORT OF TARGETED ENTERPRISES

Not Required as this is supplied by the Contractor.

C3.1.13 TRAINING, COACHING, GUIDANCE, MENTORING AND ASSISTANCE

Not Applicable.

C3.2 STANDARD SPECIFICATIONS

The Standard Specifications for Road and Bridge Works for State Road Authorities (1998 edition) prepared by the Committee of Land Transport Officials, (COLTO), as amended, shall apply to this subcontract.

C3.3 PROJECT SPECIFICATION AMENDING THE STANDARD SPECIFICATIONS

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

The number of each clause and each payment item in this part of the project specifications consists of the prefix B followed by a number corresponding to the number of the relevant clause or payment item in the Standard Specifications. The number of a new series, new clause or a new payment item which does not form part of a series, clause or a payment item in the Standard Specifications and which is included here, is also prefixed by B followed by a new number. The new numbers follow on the last clause or item number used in the relevant section of the Standard Specifications.

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SECTION B1200: GENERAL REQUIREMENTS AND PROVISIONS C3.15
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SECTION B4300: ASPHALT BASE AND SURFACING C3.29

SECTION B1100: DEFINITIONS AND TERMS

B1115 GENERAL CONDITIONS OF CONTRACT

Replace Clause 1115 with the following:

The General Conditions applicable to this Contract are the Conditions of Contract for Construction for Building and Engineering Works designed by the Employer, (1999) published by the Federation Internationale des Ingenieurs-Conseils (FIDIC).

Accordingly, all reference in the Standard Specifications to any other General Conditions of Contract (GCC) has to be amended. The Standard Specifications have been scrutinized and clauses which refer to another GCC identified. These are tabulated below together with the relevant equivalent clause in the FIDIC Conditions of Contract. The context of the reference to the GCC is also noted.

Whereas every effort has been made to include all of the affected clauses in the table, there may be some omissions. In every case, however, the FIDIC Conditions of Contract, as amended by the Particular Conditions of Contract in Part C1.2 of this Volume, shall apply.

CHANGES TO REFERENCES BY THE COLTO STANDARD SPECIFICATIONS TO THE COLTO GENERAL CONDITIONS OF CONTRACT AND FIDIC CONDITIONS OF CONTRACT

COLTO Standard Specification		**COLTO General Conditions of Contract 1998**		**FIDIC Conditions of Contract 1999**	
Clause No	Page No	Clause No	Description or Reference	Clause No	Description or Reference
1115	1100-2		Definition of GCC		Definition of FIDIC
1204	1200-2	15	Construction programme	8.3	Construction programme
1204	1200-2		General reference to GCC		Applicable to FIDIC
1206	1200-3	14	Setting out of works	4.7	Setting out of works
1209(a)	1200-4		General references to GCC		Applicable to FIDIC
1209©	1200-5	52(2)	Valuation of material brought onto site	14.5	Plant and material intended for use in the works.
1210	1200-5	54(1)	Certificate of practical completion	10.1	Taking-over certificate
1212(1)	1200-7	49(2)	CPA on alternative designs	13.8	CPA on alternative designs
1215	1200-9	45(2)	Extension of time for completion due to abnormal rainfall.	8.4	Extension of time for completion due to abnormal rainfall.
1217	1200-10	35	Care of the works	17.2	Care of the works
1303(ii)	1300-1		General reference to GCC		Applicable to FIDIC
1303(iii)	1300-1	49	Price adjustment Item 13.01(a)	13.7&13.8	Price adjustment Item 13.01(a)
1303(iii)	1300-2	49	Price adjustment Item 13.01(b)	13.7&13.8	Price adjustment Item 13.01(b)
1303(iii) 1303(iii)	1300-1 1300-2	53 53	Variations exceeding 20% Variations exceeding 20%		Not applicable to this contract Not applicable to this contract
1303	1300-2	12	Payment Item 13.01(c)	8.1	Payment Item 13.01(c)
1303	1300-2	45	Payment Item 13.01(c)	8.4	Payment Item 13.01(c)
1403(c)(ii)	1400-4	40(1)	Variation for rented accommodation	13.3	Variation for rented accommodation
1505	1500-3	40(1)	Variation for temporary drainage	13.3	Variation for temporary drainage
Item 15.08	1500-8	48	Payment of Provisional Sum	13.5	Payment of Provisional Sum
Item 15.09	1500/8	48	Payment of Provisional Sum	13.5	Payment of Provisional Sum
Item 15.11	1500-8	48	Payment of Provisional Sum	13.5	Payment of Provisional Sum
Note (2)	3100-4	40	Payment for prospecting for materials	13.5	Payment for prospecting for materials
3204(b)(iii)	3200-2	40	Payment for oversize material	13.3	Payment for oversize material
3303(b)	3300-2	2	Engineer's decisions, with reference to materials classification	3	Engineer's decisions, with reference to materials classification
Item 44.06	4400-3		General reference to GCC, PC Sums	13.5	Provisional Sums in FIDIC
Item 45.06	4500-3		General reference to GCC, PC Sums	13.5	Provisional Sums in FIDIC
5803(c)	5800-3	40	Variation, for landscaping	13.3	Variation, for landscaping
5805(d)	5800-4	40	Variation, for grassing	13.3	Variation, for grassing
Item 58.10	5800-10	48	Payment for Extra Work	13.5	Payment for Extra Work
8103(c)	8100-1	40	Variation, for testing material	13.3	Variation, for testing material
Item 81.02	8100-26		General reference to GCC, Provisional Sums		Applicable to FIDIC, Provisional Sums
Item 81.03	8100-26	22	Clearance of site on completion, with reference to core drilling	11.11	Clearance of site on completion, with reference to core drilling

B1155 WORK IN RESTRICTED AREAS

"Any omission of pay items from the pricing schedule with regard to additional or extra over payment for work in restricted areas should be regarded as deliberate and any additional cost incurred shall be included in the bulk rates tendered. (Refer also to clause B1209(g))"

B1156 OTHER DEFINITIONS

The COLTO Standard Specifications for Roads and Bridge Works for State Road Authorities (1998 edition) has been written for all contractors, employers and engineers. The works and the site are not defined and the general nature of the entities and elements that collectively constitute construction under a contract are characterized by the use of lowercase letters throughout.

These project specifications continue to use lowercase spellings in order to avoid the appearance of the capitalised and non-capitalised words to describe or prescribe the same elements of work required on this project. However, for the purposes of this contract the following definitions shall apply:

Contractor
The Contractor and the contractor is the same persona defined under clause 1.1.2.3 of the FIDIC Conditions of Contract, but who will only be formally identified by the completed Form of Acceptance C1.1.2 in this document and which will be bound into the final contract document.

Employer
The Employer and employer is the same persona and is defined in C1.2.2 Contract Data, and clause 1.1.2.2 of the FIDIC Conditions of Contract.

Engineer
The Engineer and engineer is the same persona and is defined in the C1.2.2 Contract Data, and clause 1.1.2.4 of the FIDIC Conditions of Contract.

Site
The site is defined in clause 1.1.6.7 of the FIDIC Conditions of Contract. It is bound by the limits of construction as shown in the drawings or the title of the project and extends to also include the following:

- Areas outside the construction zone areas where accommodation of traffic is placed.
- All borrowpits defined in the applications approved by the relevant Department of Minerals and Energy.
- All haul roads constructed by the contractor for purposes of access.
- Any non-adjacent sites specified in the contract documentation.
- The contractor's and his subcontractors' camp sites.

Works
The works is described in Part C4 of this document and is as defined in clause 1.1.5.8 of the FIDIC Conditions of Contract and prescribed in Sections B, C, D & E of this Volume.

Prime cost
Is a specific type of Provisional Sum for which payment is made on the production of invoices showing the cost price of the implementation or installation of the service required. Services rendered in this manner carry a mark-up for which a rate is offered at tender stage to cover all the tenderer's handling, supervision and liability costs and profit in providing the item or services.

Provisional Sum
Is a sum which is specified in the contract as a provisional sum, for the execution of any part of the works or the supply of plant, materials or services under sub-clause 13.5 (Provisional sums).

B1157 LANE OCCUPATION LEVY

Lane occupation is a charge levied by the Employer for use of its asset outside of times to which the contractor has committed himself through the original construction programme in terms of clause 8.3 of the FIDIC Conditions of Contract. The levy shall be applied each day, or part thereof, for the duration of the contractor's unauthorised extended occupation of ramps or carriageway lanes to complete the required work. The levy shall be payable by the contractor in each and every month that it occurs, and shall be deducted from the amount due to the contractor on the relevant monthly payment certificates.

The same levy shall be applied whenever during the Defects Notification Period the contractor is required to undertake repairs to defective work.

The levy shall be applied at the rate stated in the appendix to tender and will be commensurate with the reduction in service levels imposed on road users by the contractor's extended occupation.

B1158 SABS SPECIFICATIONS

Where reference is made in this specification or the standard specifications to SABS specifications, the latest published national standard shall be applicable. Use:

https://www.sabs.co.za/content/uploads/files/SABS%20Catalogue%20February%202012%20(abridged).pdf

for the most up-to-date versions of the various standards.

B1159 AGGREGATE SIZE

Where reference is made in this specification or the standard specifications to aggregate size, nominal aggregate size or maximum aggregate size, the aggregate size as listed shall be replaced with the new corresponding aggregate size as indicated in the following table:

Aggregate size	New aggregate size
26,5	28
19	20
13,2	14
9,5	10
6,7	7
4,75	5
2,36	2
1,18	1

B1160 COMPACTION

In December 2017 the TMH1 will cease to exist and was replaced by SANS 3001. In preparation for this change-over, SANRAL has already adopted the new test methods and all site Laboratories are required to perform testing according to the SANS 3001 test methods.

Therefore, the standard for compaction efforts should change from Modified AASHTO Density as per TMH1 Test Method to Maximum Dry Density (MDD) as per SANS 3001. Where reference is made to compaction or of Modified AASHTO Density in the tender documentation or the standard specifications or wherever there is conflict between the tender documentation and the standard specifications, the SANS 3001 specification and terminology shall govern.

SECTION B1200: GENERAL REQUIREMENTS AND PROVISIONS

B1202 SERVICES

Add the following first paragraph:

"All reference to services in this clause shall also mean utility services as well as traffic monitoring devices such as Comprehensive Traffic Observation (CTO), Speed Measuring Device (SMD) and Weigh-in-Motion (WIM) stations."

In the final paragraph, replace "clause 15" in the second line with "clause 8.3" In the

second paragraph, delete the word "utility" at the end of the second line.

In the final paragraph delete the second and third sentences starting with 'Should' *and replace with the following:*

There are no known services on the site. However, before any work can commence the contractor shall verify the actual position of any service and bring to the attention of the engineer any service that is not recorded. As the contractor is not authorised to remove or replace these facilities he shall:

i) Give preliminary notice, in writing to the relevant service provider, that the services on the site will require removal or protection prior to works being carried out in the vicinity of each station. The contractor shall advise the service provider of

   a) The number of services, their locations and station ID numbers and
   b) The proposed dates when work will commence in the vicinity of each service.

ii) In addition to the above preliminarynotice, give the service provider 14 days written notice of the intention to commence work in the vicinity of each facility.

iii) Upon completion of the work in the vicinity of each facility, the contractor shall notify the service provider, in writing, that work is complete and the service may be reinstated.

Any delay resulting from the removal/replacement of a service shall not be the subject of a potential claim, unless the contractor can demonstrate that every effort has been made to timeously request and/or apply for the removal/replacement of the said service. In addition, the contractor shall be deemed to have employed the services of the service provider as a subcontractor for purposes of removing and/or replacing the relevant service.

Any cost of repairs, replacement and/or installation of the stations and equipment resulting from the contractor's negligence or unauthorised action shall be to the contractor's account."

SECTION B1200: GENERAL REQUIREMENTS AND PROVISIONS

B1204 PROGRAMME OF WORK04(a)

a) General requirements

In establishing a Program, the Contractors TE Construction Manager shall assist the successful Target Enterprise with setting up a comprehensive program based on the Main Contractors requirements.

This program will be realistic and based of the approved construction program, and will take cognisance of the Target Enterprise resource requirements and limitations.

B1206 THE SETTING OUT OF WORK AND PROTECTION OF BEACONS

"Road markings, particularly the divergent/convergent lines of ramp interchanges and no

overtaking barriers are also elements of the road that require proper setting out. The contractor shall prove to the engineer that critical reference points have been satisfactorily recorded for later reinstallation before any work commences that will obliterate the existing markings."

"The contractor shall take care that property beacons, trigonometrical survey beacons or setting-out beacons are not displaced or destroyed without the consent of the engineer. Property beacons and trigonometrical survey beacons that have been displaced or destroyed shall be replaced by a registered land surveyor, who shall certify such replacement.

The cost of replacing all beacons displaced or destroyed during the course of the contract without the consent of the engineer shall be the contractor's responsibility and included in the tender rates".

B1207 NOTICES, SIGNS AND ADVERTISEMENTS

Not Applicable

B1215 EXTENSION OF TIME RESULTING FROM INCLEMENT WEATHER

"Delays caused by inclement weather events may be considered as extension to the time for completion only if the engineer agrees that the event (and not the consequence of the event) occurred during the working day within the Time for Completion and caused all progress on an item or items of work on the critical path of the contractor's approved programme (including revisions thereof) brought to a halt. Each day, or portion of a day so agreed will accrue as 'n' days of delay over the duration of the contract. The summary of accrued agreed 'n' delays shall be recorded at each site meeting.

In the case of the inclement weather event being rainfall, no limitation is placed on the quantity, severity or duration of the event as being the cause of delay except, if it is an exceptional climatic condition then it shall not be measured as a delay event under this clause, but shall be considered for delay under the general conditions of contract clause 8.4. Expressly excluded from the measurement of 'n' days are consequential delays, which are taken to mean delays to critical path activities attributable to the weather event but occurring after (i.e. outside of and distinctly separate from) the duration of the weather event itself.

The contractor shall make provision in his approved programme (including revisions thereof) of work for expected N working days caused by inclement weather. This provision shall be shown as a terminal float on the approved programmes.

Any extension to the time for completion caused by inclement weather delays will only be considered once the agreed cumulative 'n' delays exceed N = ∑n working days and if completion for the purposes of sub-clause 10.1 [*Taking Over of the Works and Sections*] is or will be delayed by inclement weather, and if the inclement weather delay occur prior to the approved Time for Completion. On this contract N = 35.

Table B1215/1 below is provided for demonstration purposes only. It shows the average number of days on which rainfall events of > 5 mm has occurred at Margate weather station. This station has been chosen because its records span 29 years and is considered sufficiently close to the site to be representative of what the contractor could expect during the contract. The full weather station record is included in Part C4: Site Information. The contractor may apply this record to any claim for weather delays that fall outside the prescripts of this clause and within the terms of the general conditions of contract.

Table B1215/1 also records the average 'other' inclement weather event days that the contractor could expect to encounter and cause delay. These have been derived from previous experience of wind and temperature influence on similar construction in the area of the site. 'Other' events could be extreme cold or heat, snow, wind or ice but are not limited to these.

From Table B1215/1 it will be noted that the sum of average rain and other delays

measured over the contract duration is 50 days yet the contractor is instructed to allow N = 35 working days in his approved programme (including revisions thereof). The reduction indicates the extent of the Employer's share of the overall risk attaching to delays caused by inclement weather.

TABLE B1215/1: AVERAGE DELAYS DUE TO INCLEMENT WEATHER

Month	Jan*	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec*	Total
Average rain days	6 (4)	4	5	3	2	2	1	2	4	6	7	6 (3)	48 (43)
Average other days						1	1	1	1				4
Total 'n' delays	4	4	5	3	2	3	2	3	5	6	7	3	47

* The figures shown in brackets are the average days of rain expected in December/January but reduced to take account of the standard construction break over the Christmas/New Year period.

Payment for extension of time resulting from inclement weather shall be for working days only, and shall be the time-related allowances calculated in the pay items as stated in the Appendix to Tender where the unit if measurement is "month", as are appropriate having regard to any other compensation which may already have been granted in respect of the circumstances concerned. The calculation for payment shall be for working days only and the rate per month shall be deemed to be based on 23 working days per month."

B1219 WATER

"Water for use on site other than municipal, shall be subject to the required permit from Department of Water Affairs and Sanitation (DWS). This shall include such extraction points as rivers, dams, streams, and boreholes.

Use Table B1219 below to determine the suitability of water for construction purposes.

TABLE B1219: WATER CLASSIFICATION FOR CONSTRUCTION: TESTINGSUGAR IN WATER

		Water Quality Classification Code						
		H0	H1	H2	H3	H4	H5	
Property	Unit	Pure water (AR)	Clean water (Rain)	Treated water (Municipal)	Silty (muddy) water with low salt content	Highly mineralised chloride sulphate water (brackish)	Waste brack, sewage, marsh, sea, etc. water	Method
PH*	-	7.0	5.7 – 7.9	4.5 – 6.5	4.5 – 8.5	9.0	-	SABS M113 SM 11 - 1990
Dissolved solids*	ppm	0	1000	1500	3000	-	-	SABS 213 SM213 - 1990
Total hardness*	-	None	None	Temporary	Temporary	Permanent	-	SABS 215 SM 215 – 1971
Suspended matter	ppm	0	2000	2000	5000	-	-	SABS 1049 SM 1049 – 1990
Electrical conductivity	mS/m	0	200	200	500	-	-	SABS 1057 SM 1057 – 1982
Sulphates (SO4)	ppm	0	200	300	500	1000	-	SABS 212 SM 212 – 1971
Chlorides (Cl)	ppm	0	500	1000	3000	5000	-	SABS 202 SM 202 – 1983
Alkali Carbonates (CO3) & Bicarbonates (HCO3)	ppm	0	500	1000	1000	2000	-	SABS 241 – 1999
Sugar	-	Negative	Negative	Negative	Negative	Negative	-	SABS 833
Quality of water required		Untreated layer works	✔	✔	✔	✔	Investigate the effect on the quality of the material	
		Chemically treated layer works	✔	✔	✔	Investigate the effect on the quality of the material		
		Concrete mass	✔	✔	✔	Investigate the effect on the quality of the material		
		Concrete prestressed	✔	✔				
		Slurry & emulsion	✔	✔				
		Soil/gravel tests	✔	✔				
		Chemical or control tests	✔	✔				

References:
1. Concrete Technology – Dr S Fulton (1989)
2. Materials Manual (PAWC)

- A primary property. The quality of the water is that quality where all three of the primary properties are within the limits.
- The tabulated single values are maximum value except in the case of the pH value for pure water, which must be 7.0

SECTION B1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

B1302 GENERAL REQUIREMENTS

(i) Legal and Contractual Requirements and responsibilities to the public

"Legislation imposes mutual obligations on the Employer and contractor in the performance of their duties to society and to the built and natural environment. To assist the contractor in understanding and assessing his obligations, and thus to make allowances for the cost of compliance with this legislation, the following additional specifications are included in the project specifications.

Section C of the Scope of Works contains the Environmental Management Plan (EMPl) for this project. Its provisions regulate the contractor's construction methods to ensure responsible conduct and treatment of the environment relevant to the project. Payment subitem 13.01(f) makes allowance for the contractor to price for environmental compliance duties as well as the duties of the Designated/dedicated Environmental Officer (DEO) as prescribed in this section.

Section D of the Scope of Works contains provisions that regulate the contractor's construction methods for compliance with Small Contractor Development, Training and Community Liaison. No separate payment mechanism has been made available for the contractor to allow for his compliance with relevant black economic empowerment legislation. The contractor shall include such costs in the existing payment items under section B1303: Payment. However, non-compliance with the provisions of Section D may lead to the imposition of penalties.

Section E of the Scope of Works contains the specifications that regulate the contractor's construction methods so far as to ensure health and safety of his employees and of the public. New pay item has been made available under this section to allow the contractor to make separate provision for the cost of health and safety measures during the construction process."

(ii) Monthly reporting

When submitting any information required and interim certificates for payment, the Contractor shall use the Employer's standard forms and formats. No payment can be made before the Contractor is registered as a vendor on the Employer's system.

The Contractor shall submit payment certificates for all work rendered in the Employer's financial year within that specific year.

The Contractor shall submit and update on a monthly basis all the appendices to the site meeting minutes and a cash flow forecast for the works.

The Contractor shall complete monthly reports regarding training, empowerment, capacity building, small contractor development, labour and staff returns and any such aspects on the Employer's Integrated Transportation Information System (ITIS) or any other format as required by the Employer. This information shall also be reported on monthly for all sub-contractors employed.

ITIS is an integrated approach to the sharing and inter-relating of technical performance information for the Employer, and relies on the Contractor following procedures to populate the system with data. ITIS currently consist of the following platforms applicable to this contract:

- ITIS Web – Web enabled portal providing online access to various functions, workflows and reports.
- ITIS Desktop – Offline data capture tool enabling the capture of information

offline, validation and then synchronisation of data with ITIS database.

- ITIS Mobile – Application (Android 6 or later) that allows the in-field capture of information using a smart phone or tablet (must have camera and GPS), validation and then synchronisation of data with the ITIS database.

The Employer has several ITIS modules running on any of the above ITIS platforms which affect the Contractor, who will need to use some of these modules to provide the required information. The current module applicable to this contract is the Project Information Module – employment and training data.

The Service Provider shall also use the South African Road Design System (SARDS) platform and modules to perform certain duties and to provide required information. The South African Road Design System provides a comprehensive framework to facilitate the process of pavement design and construction through various modules. The SARDS module applicable will be the Construction Quality Assurance module.

The above information shall form part of supporting documentation required for making interim payments in terms of the General Conditions of Contract.

Allowance has been made for these requirements in the Pricing Schedule under pay item B13.01(g) Monthly Reporting. Failure to comply may result in payments being withheld.

User manuals for the various functions can be downloaded from https://itisnra.co.za/Portal/Myaccount/UserManuals after the successful registration as a Public user.

B1303 PAYMENT

Item **Unit**

B13.01 The contractor's general obligations

"(c) Time related obligations:

(i) Execution of the works .....Sum"

Add the following pay subitems:

"(d) Health and safety obligation .....Sum

~~(e) Provision of a 10 seater mini bus .....day~~

~~(f) Environmental obligation .....month~~

~~(g) Monthly reporting.....month~~

~~(i) The provision of a 10 seater mini bus for inspecting the works during monthly site meetings, which is generally one day per month. This vehicle shall be in a neat and roadworthy condition and the contractor will be responsible for the insurance of such a vehicle."~~

In the 11th paragraph, the following amendments apply:

- *Insert as a new 2nd sentence* "Hire costs or minimum hourly charges (standing time costs) per month for construction equipment shall be deemed to be included in the rate tendered for item 13.01(c): time related payments".

- 13.01(c)(i) from the Commencement Date in terms of clause 8.1 of the general conditions of contract, until the end of the Mobilisation Period and for subitem 13.01(c)(ii) from the end of the Mobilisation Period".

"Such limitations to payments shall occur whenever the contractor falls behind by more than 2 month(s) on his initial approved programme, in which case the total price offered for 13.01(c) is converted to a lump sum and payable monthly in instalments in relation to the value of work done (excluding the value of any price adjustments in terms of sub-clauses 13.7 and 13.8 of the conditions of contract). If the calculated instalment is a negative amount, the Engineer will fairly determine an appropriate instalment amount."

"Should the combined total tendered for subitems (a), (b), and (c) exceed 10% of the tender sum (excluding CPA, contingencies and VAT), the tenderer shall state his reasons in writing for tendering in this manner. The tenderer's attention is drawn to Form B1: Contractor's Establishment on Site, (bound in this Volume), to be completed by the tenderer. If the tenderer should require additional compensation for his obligations under section 1300 (over and above the total tendered for item B13.01) by including such additional compensation in the tendered rates and/or lump sum of items in the Pricing Schedule, these items and the value of such additional compensation shall also be indicated in writing in a letter attached to Form C1.

Payment of the rate per month for subitems B13.01(d), (f), (g) and (h) shall include full compensation for all the contractor's obligations relevant to health and safety legislation (including mine health and safety, where applicable), environmental compliance, monthly reporting, security on site (as per clause 4.8 and 4.22 of the FIDIC Conditions of Contract).

The tendered rates for subitems 13.01(d), (f), (g), and (h) shall apply in the same manner as pay subitem B13.01(c), but shall not form part of the calculation of the restrictions imposed by Form to tender B1: Contractor's Establishment on Site.

The tendered rate for subitem B13.01(e) shall be for a day, or part thereof, for which the vehicle was hired and used for its intended purpose. The rate tendered shall include full compensation for the hire of the vehicle including cost of insurances, fuel, wear and tear and any other incidentals.

The rate tendered for subitem B13.01(g) shall include full compensation for registering on the Employer's project information module, compiling and capturing, monthly for the full duration of the Contract, the required information regarding training, empowerment, capacity building, targeted enterprise development, labour and staff returns, and attaching proof of monthly capturing to monthly payment certificates. It shall further include for all personnel and other costs, disbursements, overheads and profit.

A contractor who tenders zero for this pay item shall not be relieved of his statutory obligations. A nil rate offered shall be deemed not as an omission but as deliberate notice that costs have been included in the tendered rates for individual items of work or in the other preliminary and general pay items.

1704 PAYMENT

Item		Unit
17.01	**Clearing and grubbing**	hectare (ha)

The unit of measurement for clearing and grubbing is the hectare. The quantity shall be taken as the area in hectare (to the nearest 0,01 ha) designated by the engineer and cleared and grubbed in accordance with these specifications.

The tendered rate shall include full compensation for all work necessary for the clearing of the surface, the removal and grubbing of trees and tree stumps (except large trees and stumps as defined below), cutting of branches, backfilling of cavities, demolishing and disposal of structures except where otherwise provided in the project specifications, and the removal, transporting and disposal of material, all as specified in this section.

COLTO SERIES 4000: ASPHALT PAVEMENTS AND SEALSSECTION

B4200: ASPHALT BASE AND SURFACING B4202 MATERIALS

a) Bituminous binders

(i) Conventional binders

Add the following:

"The binders to be used shall be as follows:
(a) Continuously graded surfacing course: 35/50 penetration gradebitumen
(b) Continuously graded base: 30/50 penetration grade bitumen".

(ii) Non-homogeneous (heterogeneous) modified binders

Replace the last sentence with the following:

"The bitumen-rubber binder shall be manufactured according to the guidelinescontained in "Technical Guideline: The use of Modified Bituminous Binders inRoad Construction (TG 1-2015): Asphalt Academy"

b) Aggregates

Add the following paragraph to the introductory description:

"Asphalt mixes shall be manufactures using different individual single size coarse aggregates fractions and crushed fine aggregates blended to conform to the specified grading requirements. The use of natural sands shall only be permitted if approved by theengineer and shall be limited to a maximum of 5% for continuously graded mixes. All aggregate in excess of 5mm shall consist of individual nominal single sized aggregate. Forstone mastic asphalt mixes all aggregate fractions in excess of 2mm shall consist of individual single size fractions. The Contractor shall note that commercial suppliers may not be able to supply all the required single size aggregates, in which instance arrangements will have to be made for additional on site screening. No additional payment shall be made for screening aggregate. The use of run of crusher type materials shall not be permitted."

(v) Absorption

Add the following sentence:

"In addition, the total binder absorption of the combined coarse and fine aggregateblend shall not exceed 0,5%"

(viii) Grading

Delete the second paragraph commencing with "The target grading…" *and add thefollowing paragraphs*

"The grading limits for the combined aggregate grading for the asphalt base shall beas specified in table 4202/6: Continuously graded 28m maximum.

The grading limits for the combined aggregate grading for the asphalt surfacing shallbe as specified in table 4202/7: Continuously graded medium grade.

The grading limits for the combined aggregate grading for the stone mastic asphalt shall be as specified in table B4202/10. In addition to the specified grading limits, thepercentage by mass of aggregate smaller than 0,005mm, when determined in accordance with SANS 3001: Method GR3, shall be less than 1,0 of the combined

aggregates excluding the active filler added in the approved mix. The engineer mayrequest a reconsideration of blends to achieve any grading within the relevant envelope in order to improve certain mix properties.

(x) Rolled-in chippings

Replace Table 4202/11 with:

TABLE B4202/11: GRADING LIMITS FOR ROLLED-IN CHIPPINGS

Sieve size (mm)	Chip size - Percentage passing by mass	
	20 mm	**14 mm**
20,0	100	
14,0	0 – 20	100
10,0	0 – 5	0 – 20
7	0 – 1	0 – 5
0,425	0,5 max	0,5 max

Note: Refer to standard COLTO table for COLTO grading if required

Add the following new sub-item:

"(xi) Moisture content

The moisture content of aggregates, sampled from the cold feed belt, shall not exceed the following limits at the time that it is introduced into the mix:

- Coarse aggregate 2%
- Fine aggregate..... 4%"

c) Fillers

Delete the second last sentence of the first paragraph and replace with:

"With the exception of stone mastic asphalt, in no instance shall more than 2% by mass of active filler be used in the mixes."

Add the following after the last paragraph:

"For tender purposes the active filler shall be hydrated lime"

h) General

Add the following after the second paragraph:

"Sufficient aggregate for a minimum of 3 days production shall be separately stockpiled and tested for conformance and uniformity prior to use. The test results shall be presented to the engineer"

B4203 COMPOSITION OF ASPHALT BASE AND SURFACING MIXTURES

In the first paragraph, third last line, after "or active filler content" *add*:"or

aggregate content"

Replace the fifth paragraph with the following:

"The design of the asphalt mixes shall be in accordance with "Interim Guidelines For The Design Of Hot-Mix Asphalt In South Africa (June 2001)", and appropriate research results. The mix properties and requirements shall be as specified in the project specifications"

The relevant asphalt mixes for the base and surfacing layers shall comply with the requirements in table B4203/1.

Replace Table 4202/6 with:

TABLE B4202/6: GRADING LIMITS FOR COMBINED AGGREGATE FOR ASPHALTBASE

	Sieve size (mm)	Maximum nominal size (mm)			
		Semi-gap		Continuously graded	
		37,5	28	37,5	28
		Percentage passing sieve by mass			
	37,5	100		100	
	28	87 – 100	100	86 – 95	100
	20	77 – 96	93 – 100	73 – 86	87 - 96
	14		83 – 94	61 – 76	73 - 85
	10	61 – 81	73 – 88	52 - 68	64 - 79
	7		62 – 77		
	5	46 – 61	51 – 65	37 – 54	43 – 61
	2	39 – 51	39 – 51	23 - 40	28 - 44
	1	35 - 46	35 – 46	17 - 32	20 - 35
	0,600	32 – 42	32 – 42		15 – 30
	0,300	22 – 35	22 – 35	9 – 21	11 – 24
	0,150	10 – 20	10 – 20	6 – 17	8 – 19
	0,075	4 - 10	4 – 10	4 - 12	5 - 12
Nominal Mix Proportions by Mass when Bitumen is Used	**Aggregate**	93,5%		95%	94,5%
	Bitumen (grade according to project specifications)	5,5%		4%	4,5%
	Active filler*	1,0%		1,0%	1,0%

* Active filler for tender purposes to be hydrated lime.Notes:
1. For recycled asphalt the nominal mix ratios of recovered asphalt, new aggregate, new bituminousbinders, and active mineral filler to be used for tender purposes, shall be as specified in Table B4202/16.
2. Refer to standard COLTO table for COLTO grading if required

Replace Table 4202/7 with:

TABLE B4202/7 PART 1: GRADING LIMITS FOR COMBINED AGGREGATE FORASPHALT SURFACING

	Sieve size (mm)	Mix Type				
		Gap graded			Semi-gap graded	
		Stone content			Maximum stone size	
		High	Intermediate	Low	28 mm	20 mm

PERCENTAGE THROUGH SIEVE BY MASS	28				100	
	20	100	100	100	93 – 100	100
	14	78 – 100	78 – 100	78 – 100	83 – 94	83 – 94
	10	67 – 87	71 – 91	71 – 91	73 – 88	74 – 87
	5	52 – 62	61 – 71	66 – 76	51 – 65	46 – 61
	2	45 – 55	53 – 63	60 – 70	39 – 51	39 – 51
	1	45 – 55	53 - 63	60 - 70	35 - 45	35 - 45
	0,600	36 – 52	45 - 63	55 - 70	32 - 42	32 - 42
	0,300	25 - 45	35 - 55	45 - 65	22 - 35	22 – 35
	0,150	12 - 32	15 - 35	20 - 40	10 - 20	10 - 20
	0,075	5 - 12	5 – 12	5 - 12	4 - 10	4 - 10
NOMINAL PROPORTIONSBY MASS	**AGGREGATE**	92,0%	92,0%	92,0%	93%	93%
	BITUMEN (GRADE ACCORDING TO PROJECT SPECIFICATIONS)	7,0%	7,0%	7,0%	6,0%	6,0%
	ACTIVE FILLER	1,0%	1,0%	1,0%	1,0%	1,0%

Note:
Refer to standard COLTO table for COLTO grading if required

TABLE B4202/7 PART 2: GRADING LIMITS FOR COMBINED AGGREGATE FOR ASPHALT SURFACING

	Sieve size (mm)	Continuously graded			Semi-open graded
		Coarse	Medium	Fine	
PERCENTAGE THROUGH SIEVE BY MASS	28	100			
	20	88 – 100			100
	14	73 – 86	100		75 – 100
	10	64 – 77	85 – 100	100	53 – 85
	5	44 – 62	56 – 77	66 – 89	20 – 41
	2	27 – 45	33 – 48	42 – 59	7 – 20
	1	21 - 35	25 - 40	31 - 51	4 - 13
	0,600	16 – 28	18 – 32	24 – 40	3 – 10
	0,300	12 – 20	11 – 23	16 – 28	3 – 8
	0,150	8 – 15	7 – 16	10 – 20	2 – 6
	0,075	4 - 10	4 - 10	4 - 12	1 - 4
NOMINAL PROPORTIONS BY MASS	**AGGREGATE**	93,5%	93,5%	93,0%	90,5%
	BITUMEN (GRADE ACCORDING TO PROJECT SPECIFICATIONS)	5,5%	5,5%	6,0%	8,5%
	ACTIVE FILLER	1,0%	1,0%	1,0%	1,0%

Notes:
1. For recycled asphalt the nominal mix ratios of recovered asphalt, new aggregate, new bituminous binders, and active mineral filler to be used for tender purposes, shall be as specified in Table B4202/16
2. Refer to standard COLTO table for COLTO grading if required

Replace Table 4202/8 with:

TABLE B4202/8: GRADING LIMITS FOR COMBINED AGGREGATE FOR NON- HOMOGENEOUS MODIFIED BINDERS CONTINUOUSLY GRADED ASPHALT SURFACING

Sieve size	Continuously graded
	Maximum stone size

(mm)	14 mm	20 mm
20		100
14	100	86 - 97
10	83 – 100	72 – 86
5	53 – 72	47 – 64
2	30 - 47	26 – 43
1		17 - 30
0,600	13 – 25	13 – 25
0,300	8 – 18	10 – 18
0,150		6 – 13
0,075	4 - 8	4 - 10
Nominal mix proportions		
Aggregate	91%	91%
Modified binder	7%	7%
Active filler	2%	2%

Note:
Refer to standard COLTO table for COLTO grading if required

Replace Table 4202/9 with:

TABLE B4202/9: GRADING LIMITS FOR COMBINED AGGREGATE FOR CONVENTIONAL NON-HOMOGENEOUS MODIFIED AND HOMOGENEOUS MODIFIED BITUMINOUS BINDERS OPEN-GRADED ASPHALT SURFACING

Sieve size (mm)	Open graded asphalt mixes					
	14 mm nominal					10 mm maximum
	Type 1			Type 2	Type 3	
20	100			100		
14	91 – 100			74 – 100	100	
10	38 – 58			53 – 83	56 – 74	100
5	11 – 22			17 – 34	22 – 32	15 – 30
2	8 - 14			9 - 21	5 - 14	5 - 14
0,600				6 – 13		
0,300					3 – 8	
0,075	2 – 6			3 - 6	2 - 5	2 - 6
Binder type	**Road grade**	**Polymod**	**Bitumen rubber**	**Bitumen rubber**	**Bitumen rubber**	**As for 14 mm Type 1 mixes**
Aggregate	94,5%	94%	93,5%	93,5%	93,5%	
Binder	4,5%	5%	5,5%	5,5%	5,5%	
Active filler	1%	1%	1%	1%	1%	

Note:
Refer to standard COLTO table for COLTO grading if required

Replace Table 4202/10 with:

TABLE B4202/10: GRADING LIMITS FOR COMBINED AGGREGATE FOR CONVENTIONAL AND HOMOGENEOUS MODIFIED BITUMINOUS BINDERS STONE MASTIC ASPHALT SURFACING

	Maximum stone size

Sieve size (mm)	14 mm	10 mm	7 mm
14	100		
10	72 – 91	100	
7	45 – 69	57 – 83	100
5	31 – 52	33 – 59	82 – 100
2	20 – 31	21 – 31	31 – 41
1	16 - 26	16 - 26	22 - 32
0,600	14 – 24	14 – 23	18 – 30
0,300	11 – 23	11 – 22	13 – 25
0,150	9 – 17	9 – 19	9 – 19
0,075	7 - 12	7 - 12	7 - 12
Binder type	**Road grade bitumen**	**Ploymer mod binder**	**Bitumen rubber**
Aggregate	93,5%	93,5%	93,5%
Binder stabilizer (cellulose fibres)	0,35% - 0,5%	0,35% - 0,5%	0,35% - 0,5%
Binder content	6,5%	6,5%	6,5%

Note:
Refer to standard COLTO table for COLTO grading if required

Replace Table 4203/1 with:

TABLE B4203/1: ASPHALT MIX REQUIREMENTS: BASE AND SURFACING

Property	Continuously graded base mixes	Continuously graded surfacing mixes	Stone mastic asphalt mixes	Semi-gap graded surfacing mixes
Marshall Stability (kn)	8 – 18	8 – 18	-	8-18
Marshall Flow (mm)	2 – 6	2 – 6	-	2-6
Stability /Flow (kN/mm)	>2,5	> 2,5	-	>2,5
VMA (%)	> 14	> 15	> 17	>15
VFB (%)	65 – 75	65 – 75		65-75
Air voids (%)	4 – 6	4 – 6	3 – 5	4-7
Indirect tensile strength @ 25°C (kPa)	> 1000	> 1000	> 400	>800
Dynamic Creep Modulus@ 40°C (MPa)	> 20	> 20	-	>15
Modified Lottmann @ 7%voids (TSR)	> 0,7	> 0, 8	> 0,7	>0,8
Air permeability @ 7%voids (cm^2)	$< 1 \times 10^{-8}$	$< 1 \times 10^{-8}$	$<1 \times 10^{-8}$	$<1x10^{-8}$
Binder film thickness (microns)	5,5 – 8,0	5,5 – 8,0	-	5.5 – 8,0
Filler bitumen ratio	1 – 1,5	1 – 1,5	-	1-1,5
Immersion index (%)	-	-	-	>75

B4204 PLANT AND EQUIPMENT

(f) Vehicles

Replace the second paragraph with the following:

"To minimize temperature loss all vehicles used for transporting asphalt to the site shall be fitted with thermal asphalt covers (canvas covers not acceptable) irrespective of the prevailing climatic conditions or distance of transport."

Add the following subclause:

"(h) Transfer of mix to paver

Asphalt shall be transferred from the haul trucks to the paver by means of a materialsstorage and transfer vehicle and no material shall be transferred directly from the haul vehicle into the paver.

The material storage and transfer vehicle must be able to store and transfer hot- mixed asphalt material from a truck to a paver to ensure continuous paving. It mustcontain an anti-segregation auger which remixes materials just before they are delivered to the asphalt paver."

B4205 GENERAL LIMITATIONS AND REQUIREMENTS AND THE STOCKPILING OF MIXED MATERIAL

b) Moisture

Amend the last paragraph as follows:

Insert "and/or primed base" *after* "surfacing" *in the third line of the first sentence.*

Replace the last sentence with "In such case the base shall be allowed to dry out tomeet the above moisture content requirement prior to placing the surface layer."

c) Surface Requirements

(iii) Tack Coat

Add the following paragraph:

"Hand spraying shall only be permitted on areas approved by the engineer. The binder distributor shall be capable to apply the binder evenly over the fullarea. The equipment shall comply with clause 4103. Tack coat shall be applied to all transverse and longitudinal joints by hand utilizing a paint brush."

B4206 PRODUCING AND TRANSPORTING THE MIXTURE

b) Production of the mixture

(ii) Using drum-type mixer plants

Add the following:

"Pre-blending of aggregate fractions shall not be permitted and the contractorshall ensure that sufficient cold-feed bins are installed to accommodate eachindividual aggregate fraction, including the filler."

c) Transporting the mixture

Delete the second sentence in this paragraph.

Add the following sub-clause:

"f) Approval of asphalt mixture

Before any asphalt is placed on the road, the engineer shall approve the mix design.The approval process shall be as follows:

The contractor shall prepare and submit a laboratory design mix with test results at four different bitumen contents. The design mix shall be submitted on the prescribedform D3 of TMH 10: "Instruction for the Completion of As-Built Materials Data Sheets" with all the necessary test results completed. In addition, the proposed asphalt mixture shall be subjected to gyratory testing. All the expenses in preparing and submitting the laboratory design mix shall be to the contractor's cost.

Samples of all aggregate and bitumen shall be submitted with the laboratory designmix to enable the engineer to carry out check design testing as necessary. The above design and aggregate shall be submitted to the engineer at least six weeks before it is intended to commence with any asphalt production.

After approval is obtained for the laboratory design mix, a plant mix at varying bindercontents of approximately 5 to 10 tons each shall be produced. The purpose of the plant mix is for the contractor to prove that the laboratory design mix can be produced successfully. The engineer shall conduct the necessary testing on the plant mix. Theplant mix shall not be placed on the road. During the production of the plant mix, theengineer shall be afforded the opportunity to inspect the asphalt plant.

After the plant mix is approved, permission shall be given for laying a trial section atvarying binder contents in accordance with the requirements of section 4211 of the specifications. The engineer may require that the mix be further assessed by meansof CSIR Wheel Tracking or MMLS testing, the cost of which will be borne by the Employer. Mass production of asphalt shall only commence after approval of the trial section, which should be given within a maximum of ten days.

The engineer may instruct the contractor at any time to halt his paving process andto review the whole or part of the above process should a change of aggregate properties occur, the specified asphalt requirements not being met and/or a consistent asphalt mixture not be produced."

B4208 JOINTS

Add the following to this clause:

"Where the difference in level between the new work and the existing road surface exceeds25mm, joints shall be treated as follows:

Transverse steps at the end of a day's work shall be tapered off at a slope of 1 vertical to 20 horizontal (1:20) to tie in with the existing surface. The tapered section shall be removedbefore surfacing is recommenced and a joint formed in accordance with clause 4208 of thespecification.

Longitudinal joints exposed to traffic shall be provided with a taper of compacted asphalt material over the full length of the exposed joint. The width of the taper shall be at least 5 times the difference in level between the old and new work.

All costs involved in the provision and removal of these temporary ramps shall be deemedto have been included in the rates tendered for the relevant asphalt payitem."

B4209 PRE-COATED CHIPPINGS FOR ASPHALT SURFACING

Replace the first sentence of the fifth paragraph with the following:

"The pre-coated chippings used shall be 14/20*mm size aggregate."

In the last sentence of the fifth paragraph, delete "between 0,6 and 1,0mm" *and replace with*:

"minimum 0,8mm".

B4211 LAYING OF TRIAL SECTION

Add the following to the end of the first paragraph:

"As the purpose is not to calibrate any equipment, etc., the contractor shall calibrate the equipment and refine the mix design at his own cost."

B4214 QUALITY OF MATERIAL AND WORKMANSHIP

b) Coring of asphalt layers

Add the following:

"A suitable coring machine shall be available on a daily basis when asphalt paving is taking place. Cores shall only be drilled, when the road temperature is 20°C or less. Core holes shall be filled with hot mix asphalt and compacted, all within 24 hours of the core being drilled. Coring shall be carried out within 48 hours after the paving has been completed and supplied to the engineer. The test results of cores shall be submitted to the engineer within 24 hours after coring."

c) Routine inspection and tests

Add the following paragraphs:

"The contractor shall keep accurate records of:

(i) The position where every truckload of asphalt is paved (chainage, lane, timeand date).
(ii) The temperatures of the asphalt in the trucks both at the mixing plant and atthe paving equipment immediately prior to discharging the load.
(iii) The truck and load number from which control samples are taken. All samplestaken shall be appropriately numbered.

Test results and measurements will be assessed in accordance with the provisions of section 8200."

Add the following sub-clause:

d) Special tests

n-Heptane-Xylene Equivalent (Spot test) (AASHTO-T102)

If the engineer suspects that bitumen or asphalt has been overheated, he may orderthat the bitumen, or the bitumen recovered from the asphalt, be subjected to the Spot Test. Recovery of binder for use in the Spot Test shall be carried out according to an approved method.

Any bitumen having an n-Heptane-Xylene equivalent in excess of 36, or in excess of the manufacturers test result on the dispatched stock, shall be considered to have been overheated and shall be deemed to be rejected unless proven otherwise."

B4215 MEASUREMENT AND PAYMENT

Amend the following payment item:

Item	Unit
B42.08 100mm cores in asphalt paving	number (no)

Amend the 1st sentence by adding the following after the word "drilled….":

"irrespective of depth of core."

Item	Unit
B42.11 Asphalt constructed for rehabilitation purposes in accordance with the provisions of sub-sub-clause 4213(f)(ii) and 4213(f)(iii)	ton (t)

Insert the following paragraphs after the 1st paragraph:

"The unit of measurement for subitem (a) shall be the ton of asphalt base placed in compacted layer thickness and measured according to certified weighbridge tickets issuedin respect of the mixture used.

The unit of measure for subitem (b) shall be the ton of asphalt overlay placed to the nominalthickness specified if placed in terms of 4213(f)(iii) and placed to the specified level if placedin terms of 4213(f)(ii) and measured according to certified weighbridge tickets issued in respect of the mixture used.

No payment shall be made for excess width and wastage of asphalt, and the mass of suchexcess or wasted material shall be deducted from the recorded delivery for payment purposes. For layers constructed in terms of clause 4213(f)(iii) no payment shall be made for asphalt in excess of the mean spread rate(s), which shall be determined as follows:

$S = \frac{1000}{AXB}$ m^2/ton where,

S = Mean spread rate in m^2/ton

A = Average bulk relative density achieved on the road in ton/m^3

B = (specified asphalt thickness in mm) + 5mm"

Add the following to the 3rd paragraph:

"The tendered rate shall also include full compensation for joint forming, temporary ramping of construction joints between paving operations when new work is opened to traffic (including ramping material), breaking up and disposal of temporary ramps and waste material, weighing the material on the specified weighbridge and cleaning the surface."

Add the following payment item:

"Item Unit

B42.21 Aggregate variations ..... ton (t)

The unit of measurement in respect of increases or decreases in the aggregate content from that specified in the nominal mix shall be the ton.

Payment for variations shall be made as specified for clause 1213."

SECTION C: ENVIRONMENTAL MANAGEMENT PLAN

SECTION C: ENVIRONMENTAL MANAGEMENT PLAN

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C1001 SCOPE

RAUBEX KZN (PTY) LTD recognises environmental management as a key component of road infrastructure development and as part of its environmental policy has developed this Environmental Management Plan (EMPl) as a tool for continual improvement in environmental performance.

This EMPl prescribes the methods by which proper environmental controls are to be implemented by the contractor. The duration over which the contractor's controls shall be in place cover the construction period of the project as well as the limited time after contract completion defined by the Conditions of Contract for Construction for Building and Engineering Works Designed by SANRAL (1999 edition) published by the Federation Internationale des Ingenieurs-Conseils (FIDIC) as the Defects Notification Period (maintenance period).

The provisions of this EMPl are binding on the contractor during the life of the contract. They are to be read in conjunction with all the documents that comprise the suite of documents for this contract, particularly the conditions of any environmental authorisation and associated Environmental Management Programme (EMPr). In the event that any conflict occurs between the terms of the EMPl and the project specifications or environmental authorisation, the terms herein shall be subordinate.

The EMPl is a dynamic document subject to similar influences and changes as are brought by variations to the provisions of the project specification. Any changes to the EMPl and/or environmental authorisation cannot occur without being submitted to SANRAL who will manage the process of amending the EMPl.

The EMPl identifies the following:
- Relevant parties and their responsibilities;
- Construction activities that will impact on the environment;
- Specifications with which the Contractor shall comply in order to protect the environment from the identified impacts; and
- Actions that shall be taken in the event of non-compliance.

C1002 DEFINITIONS

Alien Vegetation: undesirable plant growth which includes but is not limited to all declared category 1 and 2 listed invader species as set out in the Conservation of Agricultural Resources Act (CARA), 1983 regulations. Other vegetation deemed to be alien are those plant species that show the potential to occupy in number, any area within the defined construction area and which are declared to be undesirable.

Construction Activity: any action taken by the contractor, his sub-contractors, suppliers or personnel during the construction process as defined in the contract documents.

Environment: the surroundings within which the contract exists and comprises land, water, atmosphere, micro-organisms, plant and animal life (including humans) in any part or combination thereof as well as any physical, chemical, aesthetic or cultural inter-relationship among and between them.

Environmental Aspect: any component of a contractor's construction activity that is likely to interact with the environment.

Environmental authorisation: a written statement from the National Department of Environmental Affairs, (DEA), with the general and specific conditions and the EMPr recording its approval of an application for a planned undertaking that triggers listed activities in the Environmental Impact Assessment (EIA) regulations of the National Environmental Management Act (NEMA).

Environmental Impact: any change to the environment, whether desirable or undesirable, that will result from the effect of a construction activity. An impact may be the direct or indirect consequence of a construction activity.

Environmental Impact Assessment (EIA): a systematic process of identifying, assessing and reporting environmental impacts associated with an activity and includes basic assessment and scoping and environmental impact reporting.

Environmental Management Programme (EMPr)*:* the embodiment of this EMPI to ensure that undue or reasonably avoidable adverse impacts of a development are prevented, and to ensure that positive impacts are enhanced. It thus addresses the how, when, who, where and what of integrating environmental mitigation and monitoring measures through identified projects.

Road Reserve: a corridor of land, defined by co-ordinates and/or proclamation, within which the road, including access intersections or interchanges, is situated. A road reserve may, or may not, be bounded by a fence.

Site; the site is defined in the FIDIC Conditions of Contract and in the scope of works. It is bound by the limits of construction as shown in the drawings or the title of the project and extends to also include the following:

- Areas outside the construction zones where accommodation of traffic is placed;
- All borrowpits defined in the applications approved by the relevant Department of Mineral Resources (DMR);
- All haul roads constructed by the contractor for purposes of access;
- Any non-adjacent sites specified in the contract documentation;
- The contractor's and his subcontractors' camp sites.

For the purposes of this EMPI, the site includes areas outside of, but adjacent to, the road reserve that may be affected by construction activities.

Spoil material: is material unsuitable for construction of the road pavement and for which no other useful purpose can be found in additional works on the project (e.g. for the provision of protection berms). Such material is considered as waste material that requires spoiling at convenient areas to be identified by the engineer and/or contractor within the Site. Spoil material does not require removal to a designated landfill site unless it contains identifiable hazardous contaminants.

C1003 LEGAL REQUIREMENTS

(a) General

Construction shall be according to the best industry practices, as identified in the project documents. This EMPI, which forms an integral part of the contract documents, informs the contractor as to his duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of environmental impacts caused by construction activities associated with the project. The contractor should note that obligations imposed by the EMPI are legally binding in terms of this contract. In the event that any rights and obligations contained in this EMPI contradict those specified in the standard or project specifications then the latter shall prevail.

(b) Statutory and other applicable legislation

The contractor is deemed to have made himself conversant with all legislation pertaining to the environment, including provincial and local government ordinances, which may be applicable to the contract.

Major environmental legislation, as amended from time to time, includes but is not limited to the following:

(i) Conservation of Agricultural Resources Act (Act No. 43 of 1983)

This act provides for control over the utilisation of the natural agricultural resources of South Africa in order to promote the conservation of soil, water sources and vegetation, as well as combating weeds and invader plants.

(ii) The Constitution (Act 6 of 1996)

The Constitution states that everyone has the right to an environment that is not harmful to their health or well-being, and to have the environment protected through reasonable legislative and other measures to prevent pollution and ecological degradation; promote conservation and ensure ecologically sustainable development and use of natural resources.

(iii) Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)

This act makes provision for equitable access to, and sustainable development of, minerals and petroleum resources.

(iv) National Environmental Management Act (NEMA), (Act No. 107 of 1998)

This act supports the Bill of Rights within the Constitution and highlights principles of sustainable development including preservation of ecosystems and biological diversity and avoidance, minimisation and remediation of pollution and environmental degradation. It also sets the stage for the EIA Regulations.

(v) National Environmental Management: Air Quality Act (Act No. 39 of 2004)

This act provides reasonable measures for the prevention of pollution and ecological degradation; and provides for specific air quality measures; for national norms and standards regulating air quality monitoring, management and control by all spheres of government.

(vi) National Environmental Management: Biodiversity Act (Act No. 10 of 2004)

This act makes provisions to accomplish the objectives of the United Nations' Convention on Biological Diversity. SANRAL may be required to apply for permits to conduct certain listed activities which, together with the listed threatened or protected species, may be identified by the Minister.

Section 73 (3) of this act empowers a competent authority to direct a person to take steps to remedy any harm to biodiversity resulting from the actions of that person or as a result of occurrence of listed invasive species occurring on land on which that person is the owner. Thus SANRAL may be directed to remedy harm caused by listed invasive species.

(vii) National Environmental Management: Protected Areas Act (Act No. 57 of 2003)

This act provides for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity, natural landscapes and seascapes.

(viii) National Environmental Management: Waste Act (Act No. 59 of 2008)

This act aims to regulate waste management practices through provision of national norms and standards, specific waste measures, licensing and control of waste activities, remediation of contaminated land as well as providing for compliance and law enforcement.

(ix) National Forests Act (Act No. 84 of 1998)

This act makes provision for promoting the sustainable management and development of forests, and for the protection of certain forests and trees for environmental, economic, educational, recreational, cultural, health and spiritual purposes.

(x) National Heritage Resources Act (Act No. 25 of 1999)

This act provides for an integrated and interactive system for identification, assessment and management of South Africa's heritage resources, and empowers civil society to nurture and conserve their heritage resources.

(xi) National Water Act (Act No. 36 of 1998)

This act makes provision for the protection of surface water and groundwater and their sustainable management for the prevention and remediation of the effects of pollution, as well as for the management of emergency situations.

(xii) The South African National Roads Agency Limited and National Roads Act (Act No. 7 of 1998)

C1004 ADMINISTRATION OF ENVIRONMENTAL OBLIGATIONS

Copies of this EMPI shall be kept at the site office and must be distributed to all senior contract personnel who shall familiarise themselves with its contents.

Implementation of this EMPI requires the involvement of several stakeholders, each fulfilling a different but vital role as outlined herein, to ensure sound environmental management during the construction phase of a project.

(a) SANRAL

SANRAL and anyone acting on SANRAL's behalf is accountable for the potential environmental impacts of any activities that are undertaken and is responsible for managing these impacts.

(b) The engineer

The engineer has been appointed by, and acts for, SANRAL as its on-site implementing agent and carries the responsibility to ensure that the contractor undertakes its construction activities in such a way that SANRAL's environmental responsibilities are not compromised.

The engineer will, within seven days of receiving a contractor's request for approval of a nominated Designated Environmental Officer (DEO), approve, reject or call for more information on the nomination. The engineer will be responsible for issuing instructions to the DEO where environmental considerations call for action to be taken. If in the opinion of the engineer the DEO is not fulfilling his/her duties in terms of this EMPI, the engineer may, after discussion and agreement with SANRAL, exercise his powers under FIDIC general conditions of contract and instruct replacement of the DEO in writing and with stated reason.

(c) The contractor

The contractor is responsible for project delivery in accordance with the prescribed specifications, among which this EMPI shall be included.

The contractor shall receive and implement any instruction issued by the Engineer relating to compliance with the EMPI including the removal of personnel or equipment.

Compliance with the provisions contained herein or any condition imposed by the environmental approvals shall become the responsibility of the contractor through an approved Designated Environmental Officer (DEO). The contractor shall nominate a person from among his site personnel to fulfil this function and submit to the engineer for his approval the *curriculum vitae* of the proposed DEO. This request for approval shall be given, in writing, at least fourteen days before the commencement of any construction activity clearly setting out reasons for the nomination, and with sufficient

detail to enable the engineer to make a decision.

C1005 TRAINING

(a) Qualifications

The (DEO) shall have the minimum qualifications as prescribed above, and must be conversant with all legislation pertaining to the environment applicable to the contract. He/she must be appropriately trained in environmental management and possess the skills necessary to impart environmental management skills to all personnel involved in the contract.

The contractor shall ensure that adequate environmental training takes place. All employees shall have been given an induction presentation on environmental awareness. Where possible, the presentation needs to be conducted in the language of the employees.

(b) Content

Apart from induction environmental training should, as a minimum, include the course content below and no induction or course should be given until the engineer has been afforded the opportunity to appraise it and provide comment.

(i) The importance of conformance with all environmental policies and the consequences of departure from standard operating procedures;

(ii) Environmental impacts, actual or potential, caused by work activities, prevention measures to avoid them and mitigation measures when they occur;

(iii) Work force roles and responsibilities in achieving conformance with the environmental policy and procedures, including emergency preparedness and

response requirements; and

(iv) The environmental benefits of improved personnel performance.

(c) Induction

In the case of permanent staff the contractor shall provide evidence that such induction courses have been presented. In the case of new staff (including contract labour) the contractor shall inform the engineer when and how he intends concluding his environmental training obligations.

C1006 ACTIVITIES/ASPECTS CAUSING IMPACTS

Typical environmental aspects and impacts associated with road construction are listed in Table 1: Aspects and Impacts Associated with Road Construction. Actual impacts will differ from project to project and, therefore, so may the mitigation measures employed. The commonest aspects and impacts are addressed separately and typical avoidance and/or mitigation measures described. The list and descriptions are not by any means exhaustive and they shall be used for guideline purposes only.

(a) General approach

The role of the DEO cannot be underestimated and once approved he/she shall be on the site at all times, and before the contractor begins each construction activity he/she shall give to the engineer a written statement setting out the following:

(i) The type of construction activity about to be started.
(ii) Locality where the activity will take place.
(iii) Identification of the environmental aspects and impacts that might result from the activity.
(iv) The methodology of impact prevention for each activity or aspect.
(v) The methodology of impact containment for each activity or aspect.
(vi) Identification of the emergency/disaster potential for each activity (if any) and the reaction procedures necessary to mitigate impact severity.
(vii) Treatment and continued maintenance of impacted environment.

The contractor shall programme his work in such a way that each cause and effect of a construction activity is also identified and the activity planned so as to prevent any impact from happening and shall demonstrate that he is capable of carrying out any repair and reinstatement of the damaged environment. These requirements shall be concurrent with the time constraints to produce method statements for each construction activity in compliance with the provisions of these project specifications.

The contractor shall provide such information in advance of any or all construction activities provided that new submissions shall be given to the engineer whenever there is a change or variation to the original.

The Engineer may provide comment on the methodology and procedures proposed by the DEO, but he shall not be responsible for the contractor's chosen measures of impact mitigation and emergency/disaster management systems. However, the contractor shall demonstrate at inception and at least once during the contract that the approved measures and procedures function properly.

(b) Spillages

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 a spillage, the contractor shall be liable to arrange for professional service providers to clear the affected area.

Responsibility for spill containment and treatment (whether hazardous or not) lies with the contractor. The individual causing a spill, or who discovers a spill, must report the incident to his/her DEO or to the Engineer. The DEO will assess the situation in consultation with the engineer and act as required. In all cases, the immediate response shall be to contain the spill. The exact treatment of polluted soil/water shall be determined by the contractor in consultation with the DEO and the engineer. Areas cleared of hazardous waste shall be re-vegetated according to the engineer's instructions.

Should water downstream of the spill be polluted, and fauna and flora show signs of deterioration or death, specialist hydrological or ecological advice will be sought for appropriate treatment and remedial procedures to be followed. The requirement for such input shall be agreed with the engineer. The costs of containment and rehabilitation shall be for the contractor's account, including the costs of specialist input as well as the sampling and testing of the water quality upstream and downstream of the spill. Water quality sampling and testing, and further treatment shall continue until upstream and downstream results correspond with each other.

(c) Water use and control

The contractor's use of water shall take into consideration that it is a scarce commodity, and shall be optimised. Authorisation shall be obtained from the Department of Water and Sanitation (DWS) before water is drawn from streams or new boreholes developed.

The contractor shall also ensure that any stream deviations or diversions are undertaken in such a manner that the impact on the environment is minimised. Method statements shall be submitted to the engineer for comment, detailing how the work will be undertaken, what risks are foreseen and what measures will be employed to minimise such risks. Notwithstanding any comments by the engineer, no work on stream deviations or diversions shall be undertaken in accordance with the General Authorisation.

The quality, quantity and flow direction of any surface water runoff shall be established prior to disturbing any area for construction purposes. Cognisance shall be taken of these aspects and incorporated into the planning of all construction activities. Before a site is developed or expanded, it shall be established how this development or expansion will affect the drainage pattern. Recognised water users/receivers shall not be adversely affected by the expansion or re-development. No water source shall be polluted in any way due to proposed changes.

Streams, rivers, pans, wetlands, dams, and their catchments shall be protected from erosion and flooding by dredging, daylighting, removal of debris and vegetation, etc. These shall also 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.

The contractor shall submit to the engineer his proposals for prevention, containment and rehabilitation measures against environmental damage of the identified water and drainage systems that occur on the site. Consideration shall be given to the placement of sedimentation ponds or barriers where the soils are of a dispersive nature or where toxic fluids are used in the construction process. The sedimentation ponds must be large enough to contain runoff so that they function properly under heavy rain conditions up to 1:5 year severity.

The contractor shall submit to the engineer the results of the baseline water quality test taken above and below the site of the proposed activity, and thereafter monthly testing results or at the frequency as may be specified by the Water Use Licence/General Authorisation, where applicable. No taking-over can be authorised until the water quality is shown to be at pre-construction levels or better.

(d) Vegetation management

The Contractor shall be responsible for the management of vegetation by protection of indigenous vegetation, especially identified protected species, and the prevention of alien vegetation germinating in areas disturbed by road construction activities within and outside the road reserve. This includes, for example, service roads, stockpile areas, stop/go facilities, windrows and wherever material generated for or from road construction has been stored temporarily. This responsibility shall continue for the duration of the defects notification period. The project specification may instruction the removal of CARA and/or NEMBA-listed category 1 and 2 alien species and planting of specified indigenous species.

(e) Dust control

Dust caused by construction activities shall be controlled by means such as water spray vehicles and applied at sufficient frequency so as not to cause nuisance to adjacent habitation or affect farming activities or natural vegetation. Vegetation cover should also be kept for as long as possible to reduce the area of exposed surfaces. Dust emissions from batching and screening plants shall be subject to the relevant legislation and shall be the subject of inspection by the relevant authorities.

(f) Noise control

The Contractor shall endeavour to keep noise generating activities to a minimum. Noises that could cause a major disturbance, for instance blasting and crushing activities, should only be carried out during the hours prescribed by the conditions of contract (i.e. normal hours). Should such noise generating activities have to occur at any time outside normal hours the people in the vicinity of the noise-generating activity shall be warned about the noise well in advance and the activities kept to a minimum. Relevant legislation shall also be taken into consideration, and any practical mitigation measures adopted. No noise generating activity outside of normal hours, regardless of its proximity to residences, can take place without application to the Engineer for approval. The application shall be accompanied by the noise containment measures proposed.

(g) Energy consumption

The Contractor shall take into consideration the impacts of high energy consumption, both from a cost and emissions point of view. Energy use shall be minimised, and where possible, alternative energy sources such as solar utilised.

Furthermore, the Contractor shall undertake a study of the consumption of carbon units his chosen method of construction produces in the execution of his programme.

In conjunction with the Engineer who will provide complete cooperation in this study, a month by month output shall be compiled and efforts made to see how these outputs can be curtailed and reduced.

C1007 ENVIRONMENTAL MANAGEMENT OF CONSTRUCTION ACTIVITIES

The contractor shall undertake "good housekeeping" practices during construction as stated in the COLTO Standard Specifications for Roads and Bridges and the FIDIC conditions of contract. This will help avoid disputes on responsibility and allow for the smooth running of the contract as a whole. Good housekeeping extends beyond the wise practice of construction methods that leaves production in a safe state from the ravages of weather to include the care for and preservation of the environment within which the site is situated.

The construction activities addressed below shall become part of the contractor's obligations regarding his programme of work and incorporated into the required method statements for workmanship and quality control.

a) Site establishment

i) Site Plan

The site refers to an area with defined limits on which the project is located. The contractor shall establish his construction camps, offices, workshops, staff accommodation and testing facilities on the site in a manner that does not adversely affect the environment. However, before any site establishment can begin, the contractor shall submit to the ECO for his comments and to the engineer for his approval, plans of the exact location, extent and construction details of these facilities and the impact mitigation measures the contractor proposes to put in place.

The plans shall detail the locality as well as the layout of the waste management facilities for litter, kitchen refuse, sewage and workshop-derived effluents. The site offices should not be sited in close proximity to steep areas, as this will increase soil erosion. Preferred locations would be flat areas along the route. If the route traverses water courses, streams and rivers, it is recommended that the offices, and in particular the ablution facilities, aggregate stockpiles, spoil areas and hazardous material stockpiles are located as far away as possible from any water course. No camp establishment, including satellite camps, can be placed within 150 metres of an identified wetland unless the Contractor has applied to DWS and received authorisation to do so. Regardless of the chosen site, the contractor's intended mitigation measures shall be indicated on the plan. The site plan shall have been submitted and approved before establishment commences. Detailed, electronic colour photographs shall be taken of the proposed site before any clearing may commence. These records are to be kept by the ECO and the engineer for consultation during rehabilitation of the site in order that rehabilitation is, as a minimum, done to a standard similar to pre-construction activities.

ii) Vegetation

The contractor has a responsibility to inform his staff of the need to be vigilant against any practice that will have a harmful effect on vegetation.

The natural vegetation encountered on the site is to be conserved and left as intact as possible. Vegetation planted at the site shall be indigenous and in accordance with instructions issued by the engineer. Only trees and shrubs directly affected by the works, and such others as may be indicated by the engineer in writing, may be felled or cleared. In wooded areas where natural vegetation has been cleared out of necessity, the same species of indigenous trees as were occurring shall be re-established. Protected trees may not be removed without a permit from the Department of Agriculture, Forestry and

Fisheries.

Contravention of a notice of listed protected tree species under the National Forests Act, 1998 is regarded as a first category offence that may result in a fine or imprisonment for a period up to three years, or to both a fine and imprisonment. The DEO must be conversant with the latest gazette of declared protected trees.

Rehabilitation shall be undertaken using only indigenous tree, shrub and grass species. Special attention shall be given to any search and rescue operation identified during the environmental assessment process and any removal to an on site nursery for continuous nurturing and protection and later replanting.

Any proclaimed weed or alien species that propagates during the contract period shall be cleared by hand before seeding.

Fires shall only be allowed in facilities or equipment specially constructed for this purpose. The need for a firebreak shall be determined in consultation with the engineer and the relevant authorities, and if required a firebreak shall be cleared and maintained around the perimeter of the camp and office sites.

iii) Water management

Water for human consumption shall be available at the site offices and at other convenient locations on site.

All effluent water from the camp/office sites shall be disposed of in a properly designed and constructed system, situated so as not to adversely affect water sources (streams, rivers, pans, dams etc.). Only domestic type wastewater shall be allowed to enter this system.

iv) Heating and cooking fuel

The Contractor shall provide adequate facilities for his staff so that they are not encouraged to supplement their comforts on site by accessing what can be taken from the natural surroundings. The contractor shall ensure that energy sources are available at all times for construction and supervision personnel for heating and cooking purposes.

b) Waste management

The contractor's intended methods for waste management shall be outlined and implemented at the outset of the contract, and shall be to the satisfaction of the engineer. Opportunities for avoiding, reducing, reusing and recycling of materials should be identified upfront, as should constraints for their implementation. All personnel shall be instructed to dispose of all waste in the proper manner.

i) Solid waste

Solid waste shall be stored in an appointed area in covered, tip-proof metal drums or similar container for collection and disposal. Disposal of solid waste shall be at a licensed landfill site or at a site approved by the relevant authority in the event that an existing operating landfill site is not within reasonable distance from the project area. No waste shall be burned or buried at or near the project area.

ii) Litter

No littering by construction workers shall be allowed and particular emphasis on litter control measures shall apply at stop/go facilities. During the construction period, the various contractors' facilities shall be maintained in a neat and tidy condition and the site shall be kept free of litter. At all places of work the Contractor shall provide litter collection facilities for later safe

disposal at approved sites.

iii) Hazardous waste

Hazardous waste such as oils shall be disposed of at an approved landfill site. Special care shall be taken to avoid spillage of bitumen products such as binders or pre-coating fluid to avoid water-soluble phenols from entering the ground or contaminating surface water.

Under no circumstances shall the spoiling of bituminous products on the site, over embankments, in borrow pits or any burying, be allowed. Unused or rejected bituminous products shall be returned to the supplier's production plant. Any spillage of bituminous products shall be attended to immediately and affected areas shall be promptly reinstated to the satisfaction of the engineer.

a) Control at the workshop

The contractor's management and maintenance of his plant and machinery will be strictly monitored according to the criteria given below.

i) Hazardous Material Storage

Petrochemicals, oils and identified hazardous substances shall only be stored under controlled conditions. All hazardous materials such as bitumen binders shall be stored in a secured, appointed area that is suitably fenced, bunded and has restricted entry. Storage of bituminous products shall only take place using suitable containers to the approval of the ECO and the engineer.

The contractor shall provide proof to the engineer that relevant authorisation to store such substances has been obtained from the relevant authority. In addition, hazard signs indicating the nature of the stored materials shall be displayed on the storage facility or containment structure. Before containment or storage facilities can be erected, the contractor shall furnish the engineer with details of the preventative measures he proposes to install in order to mitigate pollution of the surrounding environment from leaks or spillage. The preferred method shall be a concrete floor that is bunded. Any deviation from the method will require proof from the relevant authority that the alternative method proposed is acceptable to that authority. The proposals shall also indicate the emergency procedures in the event of misuse or spillage that will negatively affect an individual or the environment.

ii) Fuel and gas storage

The contractor shall take cognisance of the limits set by legislation for the storage of fuels and acquire the necessary authorisation for storage capacity beyond these. An adequate bund wall, 110% of volume, shall be provided for fuel and diesel areas to accommodate any leakage spillage or overflow of these substances. The area inside the bund wall shall be lined with an impervious lining to prevent infiltration of the fuel into the soil. Any leakage, spillage or overflow of fuel shall be attended to without delay.

Gas welding cylinders and LPG cylinders shall be stored chained in a secure, well-ventilated area exterior to any building wall.

iv) Oil and lubricant waste

Used oil, lubricants and cleaning materials from the maintenance of vehicles and machinery shall be collected in a holding tank and sent back to the supplier. Water and oil should be separated in an oil trap. Oils collected in this manner, shall be retained in a safe holding tank and removed from site by a specialist oil recycling company for disposal at approved waste disposal sites for toxic/hazardous materials. Oil collected by a mobile servicing unit shall be stored in the service unit's sludge tank and discharged into the safe holding tank for collection by the specialist oil recycling company.

Drip trays shall be used to collect any lubricants or fuel spilled where any vehicle and machinery are repaired or refuelled. The lubricants and fuel collected shall be handled as specified above.

All used filter materials shall be stored in a secure bin for disposal off site. Any contaminated soil shall be removed and replaced. Soils contaminated by oils and lubricants shall be collected and disposed of at a facility designated by the local authority to accept contaminated materials.

a) Clearing the site

In all areas where the contractor intends to, or is required to clear the natural vegetation and soil, either within the road reserve, or at designated or instructed areas outside the road reserve, a plan of action shall first be submitted to the engineer for his approval. Working areas shall be clearly defined and demarcated on site to minimise the construction footprint. 'No-go- areas' and other sensitive areas shall also be clearly demarcated on site, and staff must be made aware of them. The plan of action shall contain a photographic record and chainage/land reference of

the areas to be disturbed. This shall be submitted to the engineer for his records. before any disturbance/stockpiling may occur. The record shall be comprehensive and clear, allowing for easy identification during inspections.

b) Soil management

i) Topsoil

Topsoil shall be removed from all areas where physical disturbance of the surface will occur and shall be stored and adequately protected. The contract will provide for the stripping and stockpiling of topsoil from the site for later re-use. Topsoil is considered to be the natural soil covering, including all the vegetation and organic matter. Depth may vary at each site. The areas to be cleared of topsoil shall include all storage areas. All topsoil stockpiles and windrows shall be maintained throughout the contract period in a weed-free condition. Weeds appearing on the stockpiled or windrowed topsoil shall be removed by hand. Soils contaminated by hazardous substances shall be disposed of at an approved waste disposal site. The topsoil stockpiles shall be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself be eroded by the action of water.

The contractor shall ensure that no topsoil is lost due to erosion – either by wind or water. Areas to be top-soiled and grassed shall be done so systematically to allow for quick cover and reduction in the chance of heavy topsoil losses due to unusual weather patterns. The contractor's programme shall clearly show the proposed rate of progress of the application of topsoil and grassing. The contractor shall be held responsible for the replacement, at his own cost, for any unnecessary loss of topsoil due to his failure to work according to the progress plan approved by the engineer. The contractor's responsibility shall also extend to the clearing of drainage or water systems within and beyond the boundaries of the road reserve that may have been affected by such negligence.

ii) Subsoil

The subsoil is the layer of soil immediately beneath the topsoil. It shall be removed, to a depth instructed by the engineer, and if not used for road building it shall be stored and maintained separately from the topsoil so that neither stockpile is contaminated by the other. This soil shall be used for rehabilitation purposes by first spreading it over the excavated slopes without interfering with or contaminating the stockpiled topsoil.

Whilst in stockpile it shall be maintained free from erosion and weed infestation in the same way as for topsoil stockpile maintenance.

i) Excavation, hauling and placement

The contractor shall provide the ECO and the engineer with detailed plans of his intended construction processes prior to starting any cut or fill or layer. The plans shall detail the measures by which the impacts of pollution (noise, dust, litter, fuel, oil and sewage), erosion, vegetation destruction and deformation of landscape will be prevented, contained and rehabilitated. Particular attention shall also be given to the impact that such activities will have on the adjacent built environment. The contractor shall demonstrate his "good housekeeping", particularly with respect to closure at the end of every day so that the site is left in a safe condition.

ii) Spoil sites

The contractor shall be responsible for the safe siting, operation, maintenance and closure of any spoil site he uses during the contract period, including the

defects notification period. This shall include existing spoil sites that are being re-entered. Before spoil sites may be used proposals for their locality, intended method of operation, maintenance and rehabilitation shall be given to the ECO for his/her comments and to the engineer for his approval. The location of these spoil sites shall have signed approval from the affected landowner before submission to the ECO and the engineer. No spoil site shall be located within 500m of any watercourse. A photographic record shall be kept of all spoil sites for monitoring purposes. This includes before the site is used and after re-vegetation.

The use of approved spoil sites for the disposal of any waste shall be prohibited. Spoil sites will be shaped to fit the natural topography. Depending on availability these sites shall receive a minimum of 75mm topsoil and be grassed with the recommended seed mixture. Appropriate grassing measures to minimise soil erosion shall be undertaken by the contractor. This may include both strip and full sodding. The contractor may motivate to the engineer for other acceptable stabilising methods. The engineer may only approve a completed spoil site at the end of the defects notification period upon receipt from the contractor of a landowner’s clearance notice.

C1008 AREAS OF SPECIFIC IMPORTANCE

Any area, as determined and identified within the project documents as sensitive or of special interest within the site shall be treated according to the express instructions contained in these specifications or the specific environmental authorisation, as well as the approved EMPr. The contractor may offer alternative solutions to the engineer in writing should he consider that construction will be affected in any way by the hindrance of the designated sensitive area or feature. However, the overriding principle is that such defined areas requiring protection should not be changed. Every effort to identify such areas within the site will have been made prior to the project going out to tender. The discovery of other sites with archaeological or historical interest that have not been identified shall receive ad hoc treatment.

a) Archaeological sites

If an artefact on site is uncovered, work in the immediate vicinity shall be stopped immediately. The contractor shall take reasonable precautions to prevent any person from removing or damaging any such article and shall immediately upon discovery thereof inform the Engineer of such discovery. The South African Heritage Resource Agency (SAHRA) is to be contacted, and a SAHRA-registered archaeological consultant may undertake the necessary work involved in confirming the find and advising on how it should be preserved or removed. Work may only resume once clearance is given in writing by the archaeologist. (Read with FIDIC condition of contract clause 4.24).

If a grave or midden is uncovered on site then all work in the immediate vicinity of the graves/middens shall be stopped and the engineer informed of the discovery. The South African Heritage Resource Agency and the South African Police Services (SAPS) should be contacted and in the case of graves, arrangements made for an undertaker to carry out exhumation and reburial. The undertaker will, together with SAHRA, be responsible for attempts to contact family of the deceased and for the place where the exhumed remains can be re-interred.

C1010 RECORD KEEPING

The engineer and the DEO will continuously monitor the contractor's adherence to the approved impact prevention procedures and the DEO shall submit regular written reports to the ECO and to the Engineer at least once a month. The DEO will report the environmental compliance performance of the project at regular site meeting. The engineer shall issue to the contractor a notice of non-compliance whenever transgressions are observed. The DEO shall document the nature and magnitude of the non-compliance in a designated register, the action taken to discontinue the non-compliance, the action taken to mitigate its effects and the results of the actions. The non-compliance shall be documented and reported to the engineer in the monthly report.

Copies of all authorisations shall be kept on site and made available for inspection by visiting officials from SANRAL, relevant authorities or internal/external auditors.

C1011 COMPLIANCE AND PENALTIES

The contractor shall act immediately when a notice of non-compliance is received and correct whatever is the cause for the issuing of the notice. Complaints received regarding activities on the construction site pertaining to the environment shall be recorded in a dedicated register and the response noted with the date and action taken. This record shall be submitted with the monthly reports and an oral report given at the monthly site meetings.

Any non-compliance/omissions with the procedures in this EMPl, environmental authorisations and the approved EMPr constitute a breach of the Conditions of Contract. Regulatory financial penalties imposed on SANRAL shall be passed onto the defaulting parties.

C1012 PROJECT SPECIFIC CONDITIONS

TABLE 7/1: MECHANISMS THAT CAUSE ENVIRONMENTAL IMPACTS DURING CONSTRUCTION ACTIVITIES

Section	Contents	Environmental Impacts				
		Pollution Type	**Deformation of Landscape**	**Soil erosion**	**Alien Vegetation**	**Sensitive Areas (to be completed by compiler)**
1300	Camp Establishment	Storage Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
3900	Pavement layers	Waste treatment Hazardous waste Water supply Spillage Storage Noise / lights Dust control	Selection of site Preserve indigenous vegetation Preserve topsoil Demarcate sensitive areas Maintenance of windrows	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
4500	Double Seals					
4800	Treatment of an Existing Surface					

SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LIMITED

CONTRACT RAUBEX-CPG N.002-212-2018/1

PERIDODIC MAINTENANCE OF THE NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

SECTION E: REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS

Note to tenderer:
Wherever reference is made in this section of the Scope of Works to contractor this is the equivalent of the *principal contractor* in the Occupational Health and Safety Act and Regulations. Similarly, reference to subcontractors is equivalent to *other contractors*.

SECTION E: REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS

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E1001 SCOPE

The Occupational Health and Safety Act, Act 85 of 1993 and its Regulations together with SANS Codes set out minimum standards with regards to Occupational Health and Safety. RAUBEX KZN (PTY) LTD, has developed this Occupational Health and Safety Specifications with these minimum standards in mind and in certain stages the requirements of SANRAL exceeds the minimum legal requirements to follow best practices and to ensure a healthy and safe workplace for all.

SANRAL in no way assumes The Principal Contractors legal liabilities and responsibilities. The Principal Contractor is and remains accountable for the quality and execution of his health and safety programme for his employees. This Health and Safety Specification reflects minimum legal and SANRAL requirements and should not be construed as all encompassing.

It is realized that The Principal Contractor have its own Health and Safety Management system and safe work practices. The intention of this Health and Safety Specification is not to change The Principal Contractors Health and Safety management system, but for The Principal Contractor to use its current Health and Safety management system to draw up a project specific Health and Safety plan according to these specifications as well as to legally comply with the Construction Regulations, GNR.84 of 2014.

It is the responsibility of the Principal Contractor and other Contractors to make themselves conversant and comply with the requirements and conditions contained in the various legislation pertaining to their profession and scope of works at all times.

This specification is not exhaustive of all duties imposed by the Occupational Health and Safety Act, Act 85 of 1993 and its Regulations, governing the duties and obligations, of a Designer, Principal Contractor and Contractor performing duties in terms of an agreement with the client (SANRAL). These duties are fully described in the Occupational Health and Safety Act, Act 85 of 1993 and its Regulations and it is the duty of every Designer, Principal Contractor and Contractor to acquaint themselves therewith before commencing work.

Words used herein in the singular shall be deemed to include the plural and male shall include female and vice versa, unless the context otherwise requires.

This specification is compiled to ensure that the Principal Contractor and any other Contractors working for SANRAL directly or through a Principal Contractor, are aware of the Occupational Health and Safety requirements when working on a SANRAL contract, as well as to make them aware of their legal liabilities and responsibilities as per the Occupational Health & Safety Act, Act 85 of 1993, and its Regulations.

E1002 DEFINITIONS AND ABBREVIATIONS

Assessment – An opinion or a judgment about someone or something that has been thought about very carefully.
At-risk behaviour – Conduct that unnecessarily increases the likelihood of an injury or incident.

Audit – A systematic and documented review of the effectiveness of implementation of processes, programmes and procedures, based on general process criteria.

Baseline risk assessment: This is the initial assessment of risk in a workplace. It is a broad assessment and includes all activities taking place on site but does not include risk control measures or safeguards.

CIDB – Construction Industry Development Board
Client – Any organization or person for whom construction work is performed. For the purpose of this document, the client is the South African National Roads Agency SOC Limited.

CHSA – Construction Health and Safety Agent
Communicate – The process of two-way dialogue which is understood by both parties.

Competence – A combination of attributes such as knowledge, training, experience and qualifications to assure successful performance.

Competent Person – Means a person who has in respect of the work or task to be performed the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No. 67 of 2000), those qualifications

and that training must be regarded as the required qualifications and training; and is familiar with the Act and with the applicable regulations made under the Act.

Consequence – Outcome or impact of an event.

Continual Improvement – A recurring process of enhancing performance to achieve consistent improvements in overall performance.

Contractor – An employer as defined in section 1 of the OHS Act, who performs construction work and includes Principal Contractors and Sub-Contractors.

Construction Work – any work in connection with:
- The construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or
- The construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work.

Corrective Action – An action taken to eliminate the cause of a detected non-conformity or other undesirable situation.

Construction Regulations (CR) – Construction Regulations, GNR. 84 of 2014

Critical equipment – A piece of equipment or a structure whose failure to perform to design specification, has the potential to result in a major accident event.

Design – in relation to any structure, includes drawings, calculations, design details and specifications.

Designer –
a) competent person who:
   - Prepares a design
   - Checks and approves a design
   - Arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
   - Designs temporary work, including its components
b) an architect or engineer contributing to, or having overall responsibility for a design
c) a building services engineer designing details for fixed plant
d) a surveyor specifying articles or drawing up specifications;
e) a contractor carrying out design work as part of a design and building project; or
f) an interior designer, shop fitter or landscape architect

DMR – Driven Machinery Regulations, GNR. 295 of 26 February 1988

Documents – Structured units of recorded information and its supporting medium (paper or electronic). Most records are documents, but not all documents are records. A document becomes a record when it is part of a business transaction, is kept as evidence of that transaction and is managed within a record-keeping system.

EIR – Electrical Installation Regulations, GNR. 242 of 6 March 2009

Emergency – An abnormal occurrence that pose a threat to the safety or health of employees, customers, or local communities, or which can cause damage to assets or the environment.

Employee – An individual who is employed by or works for an Employer and who receives or is entitled to receive any remuneration or who works under the direction or supervision of an employer or any other person.

Employer – Any person who employs or provides work for any person and remunerates that person or expressly or tacitly undertakes to remunerates him, but excludes a labour broker as defined in section 1(1) of the Labour Relations Act, 1956 (Act No. 28 of 1956).

EMR – Electrical Machinery Regulations, GNR. 250 of 25 March 2011

Environment – The surroundings or conditions in which a person, animal or plant lives or operates, including air, water, land, natural resources and habitats.

Excavation work – The making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping

GAR – General Administrative Regulations, GNR. 929 of 25 June 2003

GMR – General Machinery Regulations, GNR. 1521 of 5 August 1988

GSR – General Safety Regulations, GNR. 1031 of 30 May 1986

Harm – A significant and or long lasting adverse effect on people, the environment or the community.

Hazard – A source, situation or act with a potential for harm in terms of human injury or ill health.

Health and Safety File – Means a file, or other record in permanent form, containing the information in writing as required by the Construction Regulations, GNR. 84 of 7 February 2014, Section 7(1)(b).

Health and Safety Plan – Means a project specific documented plan in accordance with the client's health and safety specifications, as required by the Construction Regulations, GNR. 84 of 7 February 2014, Section 7(1)(a).

Health and Safety Specification – Means a project specific document prepared by the client pertaining to all health and safety requirements related to construction work, as required by the Construction Regulations, GNR. 84 of 7 February 2014, Section 5(1)(b).

HSE – Health, Safety and Environment. Commonly used in the format HSE.

Incident – Work-related events (including accidents which give rise to injury, ill health, fatality or emergencies) that have resulted in, or has the potential to result in adverse consequences to people, the environment, property, reputation or a combination of these.

Likelihood – A description of probability or frequency, in relation to the chance that something will occur.

Lost Time Injury (LTI) – When a person is injured during the execution of his/her duties and as a result of the injury is unable to perform his/her regular duties for one full shift or more on the day following the day on which the injury has incurred, whether a scheduled work day or not(weekend).

Management System – Management processes and documentation that collectively provide a systematic framework for ensuring that tasks are performed safely, correctly, consistently and effectively to achieve a specified outcome and to drive continual improvement in performance.

Mandatory – An agent, contractor or sub-contractor for work, but without derogating from his status in his own right as an employer or a user.

MSDS – Material Safety Data Sheet

Near Hit / Near Miss – Any occurrence or situation which had the potential for adverse consequences to people, the environment, property, reputation or a combination of these.

Non-conformance – Any deviation from work standards, practices, procedures, regulations that could either directly or indirectly lead to injury or illness, property damage, damage to the environment or a combination of these.

OHS Act – Occupational Health & Safety Act, 85 of 1993

Occupational Hygiene Survey - Means a Survey or Analysis on Hazardous Environmental Exposure e.g. Noise, Lead, Asbestos, Airborne Pollutants, Thermal Stress, Hazardous Chemical Substances, etc. to Persons conducted by an Inspection Authority Approved by the Department of Labour for the Exposure identified, provided that an inspection authority approved by the chief inspector with respect to any particular service shall be an Approved Inspection Authority with respect to that service only

Occupational Hygiene - Means the anticipation, recognition, evaluation and control of conditions arising in or from the workplace, which may cause illness or adverse health effects to persons.

Policy – Statement by an organization of its intentions and principles in relation to its overall performance which provides a framework for action and for the setting of its objectives and targets.

PPE – Personal Protective Equipment

Preventive Action – An action implemented to eliminate the cause of a potential non-conformity or other undesirable potential situation.

Principal Contractor – An employer appointed by the client to perform construction work and who is in overall control and management of a part of or the whole construction site.

Procedure – A specific documented way to carry out an activity or a process.

Records – Recorded information, in any form that is kept as evidence. Records include monitoring results, evidence of training, audits, inspections and calibration reports.

Risk Assessment – A process of evaluating the risk(s) arising from hazards taking into account the adequacy of any existing controls and deciding whether or not the risk(s) is acceptable.

Risk Management – The ongoing treatment of risks through the application of management policies, processes, procedures and risk control measures.

Risk – A combination of the likelihood of an occurrence of a hazardous event or exposure and the severity of injury or ill health that can be caused by the event or exposure.

Root Cause – The cause of the incident that, when rectified, will prevent the recurrence of not just incidents with those exact circumstances, but others with similar causes.

SACPCMP – South African Council for Project and Construction Management Professions

SANRAL - South African National Roads Agency SOC Limited

Supplier – A person or company that supplies material or equipment to a contractor on a construction site, but does not physically carry out construction work on the construction site.

The Act – The Occupational Health and Safety Act No. 85 of 1993

The Site – The area where work is carried out for SANRAL as defined on the front page of this document.

WAH – Acronym for Working at Heights.

E1003 HEALTH AND SAFETY POLICY

Contractors are expected to have their own written Health and Safety Policy. The policy should declare their attitude and approach to the health, safety and welfare of their employees and others. Provision must be made to review the policy regularly and the CEO or Managing Director must sign and date the policy to indicate his commitment to ensuring the health and safety of his employees.

E1004 ROLES AND RESPONSIBILITIES

Every Contractor is considered to be an employer in his own right and shall comply with all legal requirements pertaining to an employer, which include the responsibility to provide as far as reasonably practicable a safe and healthy working environment for his employees, as per Section 8 of the OHS Act.

In conjunction with Section 8 of the OHS Act, all employees on the project are responsible for their own safety as well as the safety of persons who may be affected by their acts, as per Section 14 of the OHS Act. It is the responsibility of each employee to ensure that he acts in a safe manner before, during and after work is carried out.

The Principal Contractor shall ensure that where required by the OHS Act and Regulations, competent employees are appointed in writing. These appointments must be project/contract specific and specific to the tasks that will be performed. Every appointment must display the duties of the person appointed and training certificates from a registered training provider must be attached to such appointment (where applicable).

A list of possible appointments can be found in clause E1010 below.

a) Records

Record of all training shall be kept by the employer and shall be readily available. Records shall make provision for refresher training where applicable. Where an employee is legally appointed with certain duties and responsibilities a copy of the training certificate must be attached to the appointment.

E1007 DUTIES

Various duties are imposed on the client, designer, principal contractor and other contractors by the Construction Regulation, 2014, Sections 5, 6 & 7. SANRAL will comply and carry out the required duties as contemplated in Section 5 of the Construction Regulations, 2014 and it is expected from the designer and every contractor to make themselves conversant with the requirements and duties imposed on them and to ensure that they comply with the requirements of section 6 & 7 at all times.

E1008 MANAGEMENT AND SUPERVISION

The Principal Contractor shall ensure that the project is managed safely and legal compliance is ensured at all times.

A full-time competent person must be appointed as a Construction Manager to manage all construction work, including health and safety compliance. The construction manager may not be appointed to manage more than one single construction site.

The construction manager must appoint construction supervisors responsible for construction activities and ensuring occupation health and safety on the construction site.

The Principal Contractor must appoint a full-time construction health and safety officer, who is registered with the SACPCMP, to assist in the control of health and safety aspects on site.

E1009 RISK MANAGEMENT

The Principal Contractor must follow a formal risk-based approach to ensure hazard control measures are implemented to an acceptable reasonable practical level. The Principal Contractor and his employees shall be responsible to ensure all hazards pertaining to his scope of activity are proactively identified, the risks assessed and appropriately eliminated or minimized and managed on an ongoing basis. Risk assessments shall also identify possible and potential environmental, health and hygiene issues pertaining to each hazard with potential exposures and limits.

a) Risk Assessment

i) Hazard Identification and Risk Assessment (Construction Regulation 9)

The Principal Contractor shall, before the commencement of any construction work or work associated with the aforesaid construction work and during such work, conduct a risk assessment by a competent person, appointed in writing and the risk assessment so produced shall form part of the OH&S plan and be implemented and maintained as contemplated in Construction Regulation 9(1). Competence is a factor of training, knowledge, experience and/or appropriate qualifications.

The risk assessment shall include, as far as is reasonably practicable, at least:

- The task or task step
- The identification of the risks and hazards to which persons may be exposed during the task or task step;
- The analysis and evaluation of the risks and hazards identified, inclusive of a residual risk rating methodology. The method to be used is not prescribed;
- A documented plan of safe work procedures, to mitigate, reduce or control those residual risks that have been identified as unacceptably high, by means of the rating system;
- A monitoring plan;
- A review plan, inclusive of dates to be adhered to; and
- Ergonomic related risks are to be analysed, evaluated and addressed as part of the process.

Based on the risk assessments, The Principal Contractor shall develop a set of site-specific OH&S rules that shall be applied to regulate the OH&S aspects of the construction. The risk assessments, together with the site-specific OH&S rules shall be submitted to the Employer before construction on site

commences. SANRAL has conducted a Baseline Risk Assessment as per clause E1009 (b) below, which must be used by The Principal Contractor to develop task specific risk assessments before work commences. This does not mean that all possible Risk Assessments must be attended to before work commences, but that all relevant Risk Assessments receive the necessary attention as the contract progresses, and this is the responsibility of The Principal Contractor.

All variations to the scope of work shall similarly be subjected to a risk assessment process.

ii) Risk Assessment Monitoring

The Principal Contractor shall ensure that a monitoring plan for all risk assessments are in place. Risk assessments must be monitored to ensure effectiveness and employee understanding. The monitoring of risk assessments shall be formal and records thereof shall be available for audit purposes.

iii) Review of Risk Assessment

The Principal Contractor shall review the hazard identification, risk assessments and standard safe working procedures prior to any work activity commencement and at each production planning and progress report meeting as the contract work develops and progresses and each time changes are made to the designs, plans and construction methods and processes. The Principal Contractor shall provide the Employer, sub- contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated above.

Activities carried out without conducting a risk assessment or found to be non-compliant with the risk assessment, will be stopped until such time a risk assessment is compiled and work is carried out according to the risk assessment.

Risk assessments must be fully communicated to all relevant personnel and must be considered when establishing training, awareness and competency requirements.

b) Baseline Risk Assessment

SANRAL prepared a Baseline Risk Assessment from which the Health and Safety Specifications for this project was prepared. The Baseline Risk Assessment highlights all work for which The Principal Contractor must prepare safe work procedures and or work method statements. It must be noted that the Baseline Risk Assessment is not exhaustive and Principal Contractors are required to identify risks and come up with control measures, this must be identified by Principal Contractor when preparing the Issue Based Risk Assessments. During the briefing, the client will brief tenderers about the hazards and risks that are associated with the anticipated construction work.

The Baseline Risk Assessment for this Project can be found in clause E1018.

c) Continuous Risk Assessment

The Principal Contractor shall continuously assess the risks of the activities that are carried out. Risk assessments must be in writing, site specific and must be reviewed continuously to ensure it is current and it address all the relevant hazards and risks associated with the specific activity at the specific site.

The Risk assessment must be discussed with the whole work crew before the activity starts and the work crew must acknowledge in writing having discussed the risk assessment and that they understand it. This acknowledgement must be on site and must be available to the client for audit purposes.

E1010 LEGAL COMPLIANCE AND DOCUMENT CONTROL

The Principal Contractor is required to implement systems and procedures to ensure legal compliance through:

- Identification of all relevant HSE legislation, standards and codes applicable to its operations.
- Have available copies of all relevant HSE legislation, standards and codes for reference purposes.
- Update legislation, standards and codes with any changes
- Communicate to all employees any changes that may affect their accountabilities and conformances
- Incorporate any legal requirements into their HSE management system
- Monitor and review their HSE management system for effectiveness.

The Principal Contractor shall, as a minimum, comply with:

- The Occupational Health and Safety Act and Regulations (Act 85 of 1993), an up-to-date copy of which shall be available on site at all times.
- The Compensation for Occupational Injuries and Diseases Act (Act 130 of 1993), an up-to-date copy of which shall be available on site at all times.
- Where work is being carried out on a "mine", The Principal Contractor shall comply with the Mines Health and Safety Act and Regulations (Act 29 of 1960) and any other OH&S requirements that the mine may specify. An up-to-date copy of the Mines Health and Safety Act and Regulations shall be available on site at all times.

Wherever in the Construction Regulations or this specification there is reference to other regulations (e.g. Construction Regulation 24: Electrical Installations and Machinery on Construction Sites) The Principal Contractor shall be conversant with and shall comply with these regulations.

All legal appointments of The Principal Contractor regarding the Health and Safety of his employees who are to work on the project are addressed and governed by the OHS Act and applicable Regulations. Legal appointments must be in place and must reflect in the project safety file before work commences.

a) Overall Supervision and Responsibility for OH&S

SANRAL will appoint the Principal Contractor in terms of Construction Regulation 5(1)(k). A Mandatory agreement as per Section 37.2 of the OHS Act, shall be signed between SANRAL and the Principal Contractor.

It is a requirement that the Principal Contractor, when he appoints other contractors in terms of Construction Regulations 7(1)(c), 7(1)(d), 7(1)(f) and 7(3) includes in his agreement with such Contractors the following:

- OH&S Act (85 of 1993), Section 37(2) agreement: "Agreement with Mandatory".
- OH&S Act (85 of 1993), Section 16(2) appointee(s) as detailed in his/her/their respective appointment forms. (Where applicable).

The signed Mandatory agreements shall be placed in the project file for reference and for audit trail purposes.

b) Specific Supervision Responsibilities for OH&S

The Principal Contractor shall appoint designated competent employees and/or other competent persons as required by the OHS Act and Regulations, as well as this specification. Appointments shall be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information shall be communicated to and agreed with the appointees. Where applicable, the training certificate must be attached to the appointment. Notice of appointments shall be submitted to the Employer. All changes shall also be communicated to the Employer.

Below is a list of possible appointments for the project, which is not an all-inclusive list, but for reference purposes only:

Appointment	**Legal Reference**
Assistant to CEO	OHS Act 16(2)
Health and Safety Representative	OHS Act 17(1)
Nominated Health and Safety Committee Member	OHS Act 19(3)
Contractor (Sub-contractor)	CR 7(1)(c)(v)
Construction Manager & Alternate Construction Manager	CR 8 (1)
Assistant Construction Manager	CR 8(2)
Health and Safety Officer	CR 8(5)
Construction Supervisor	CR 8(7)
Assistant Construction Supervisor	CR 8(8)
Risk Assessor	CR 9(1)
Fall Protection Plan Developer	CR 10(1)(a)
Structure Inspector	CR 11(2)(a)
Temporary Works Designer	CR 12(1)
Temporary Works Supervisor	CR 12(2)
Excavation Supervisor	CR 13(1)(a)

Demolition Supervisor	CR 14(1)
Scaffold Supervisor	CR 16(1)
Material Hoist Inspector	CR 19(8)(a)
Bulk Mixing Plant Supervisor	CR 20(1)
Construction Vehicle & Mobile Plant Operator Authorised	CR 23(1)(d)(i)
Temporary Electrical Installation Controller	CR 24(c)
Stacking and Storage Supervisor	CR 28(a)
Fire Equipment Inspector	CR 29(h)
Incident investigator	GAR 9(2)
Lifting tackle inspector	DMR 18(10)(e)
Ladder inspector	GSR 13(a)
First Aider GSR	GSR 3(4)
Hazardous Chemical Substance Supervisor	

In addition to the above, the Employer requires that a Traffic Safety Officer be appointed, that is Approved by the Resident Engineer and Client.

It is a requirement that The Principal Contractor shall provide the Employer with an organogram of all sub-contractors that he/she has appointed or intends to appoint and keep this list updated and prominently displayed on site.

a) Designation of OH&S Representatives (Section 17 of the OH&S Act)

Where the Principal Contractor employs more than 20 persons (including the employees of sub- contractors) he has to appoint 1 (one) OH&S representative for every 50 employees or part thereof. This is a minimum (legal) requirement. The Principal Contractor may at his own discretion appoint more OH&S representatives according to site specific requirements. General Administrative Regulation 6 requires that the appointment or election of the OH&S representatives be conducted in consultation with employee representatives or employees (Section 17 of the Act and General Administrative Regulation 6 & 7). OH&S representatives shall be designated in writing and the designation shall include the area of responsibility of the person and term of the designation. OH&S representatives must be experienced, permanently employed by The Principal Contractor or his sub-contractors, trained and able to move freely within their designated area of responsibility.

b) <u>Duties and Functions of the OH&S Representatives (Section 18 of the OH&S Act)</u>

The Principal Contractor shall ensure that the designated OH&S representatives perform their functions in respect of the workplace or section of the workplace for which they have been appointed.
These functions include, but not limited to:

- Conduct continuous
- Monitoring and monthly inspections of their respective areas of responsibility,
- Focusing on unsafe acts and unsafe conditions, and
- Report thereon to The Principal Contractor.
- Participate in accident or incident investigations.
- Attend all OH&S committee meetings.
- The complete list of functions can be found in Section 18 of the OHS Act.

c) <u>Appointment of OH&S Committee (Sections 19 and 20 of the OH&S Act)</u>

The Principal Contractor shall establish an OH&S committee, which shall meet at least once a month, where two or more Health and Safety Representatives have been appointed. OH&S representatives must be appointed as OH&S committee members. The number of management appointed members may not exceed the number of OH&S representatives on the committee.

E1011 OPERATIONAL INTEGRITY

The operational integrity of plant, equipment, structures and protective systems must be monitored and assured on an ongoing basis throughout the project cycle. Hazards must be identified, assessed and as far as reasonably practicable, eliminated or the risks treated to as low as reasonable practicable (ALARP).

a) Construction Plant & Equipment

The Principal Contractor shall maintain all items of plant and equipment necessary to perform the work in a safe condition.

SANRAL reserves the right to inspect items of plant and equipment brought to site and used on site by The Principal Contractor. Should it be found that any item is inadequate, faulty, unsafe or in any other way unsuitable for the safe and satisfactory execution of the work for which it is intended, The Principal Contractor will be advised of such observation/inspection, and The Principal Contractor shall be required to repair, make safe or remove such item from operation and replace it with a safe and adequate substitute.

The Principal Contractor shall ensure that all plant, equipment, and power tools that are brought onto and used on site are:

- Appropriate for the type of work to be performed
- Placed on a register and inspected by a competent person or the authorized operator before use, daily or monthly dependent on Legislation and project requirements.
- Record inspection findings on a register that must be kept on site.
- The inspection register shall reflect the serial number of the plant, equipment or power tool.
- Maintained and used in accordance with the manufacturers recommendations
- Have adequate machine guarding fitted to all exposed rotating or moving parts, as reasonably practicable, that have the potential to cause harm
- All electrical power supply units are protected with operational earth leakage devices.
- Any defective, damaged or sub-standard equipment must be marked as unsafe for use and removed from operation as soon as possible.

b) Standards and Registers

As standard project procedures, The Principal Contractor is expected to:

- Set up an initial set of registers as per the requirements of the OHS Act and Regulations.
- Complete the registers for each piece of plant, tool and equipment brought on and used on site
- Maintain a complete, continuous and comprehensive inspection and service history in these registers or checklists
- Ensure daily, weekly, monthly inspections are done and recorded for all plant, tools & equipment by a competent person as required by the OHS Act and Regulations.
- Have the inspection and maintenance records available for audit purposes.

E1012 OCCUPATIONAL HEALTH AND HYGIENE

a) Medical Fitness for Duty

All contractor employees shall undergo medical examinations and be certified fit for duty by an Occupational Health Practitioner before they are allowed to work on site.

The medical certificate must be in the form of Annexure 3 of the Construction Regulations and stipulate the possible exposures the employee might be exposed to during the execution of the project.

It is recommended and in the best interest of The Principal Contractor to implement pre- employment as well as exit medical surveillance, especially with regards to Section 8 of the Noise Induced Hearing Loss Regulation.

b) Occupational Hygiene Surveys

The Principal Contractor and his contractors shall ensure compliance to:

1. Hazardous Chemical Substances Regulations
2. Noise Induced Hearing Loss Regulations
3. Environmental Regulations for Workplaces

After an Occupational Health Risk assessment has been conducted and Occupational Exposures and Environmental Factors has been identified, the Principal Contractor will conduct the applicable Occupational Hygiene Surveys by an Approved Inspection Authority that includes, but is not limited to Noise, Hazardous Chemical Substances, Vibration, Illumination, Thermal Stress, etc.

c) First Aid

According to GSR 3(4), where more than 10 employees are employed at a workplace/worksite, The Principal Contractor shall ensure that there is at least one trained first aider for every group of 50 employees at the workplace/site. First Aid boxes must be provided where more than 5 employees are employed and must be readily available and accessible for the treatment of injured persons at the workplace.

To ensure immediate treatment of an injured person, it is recommended that all work crews have at least one trained first aider, with a fully stocked first aid box, irrespective of the number of people in the work crew. This is especially important when contractors work at great distances from the nearest emergency facility or town. These persons shall be appointed in writing as the first aiders with their certificates attached as proof of competency.

The minimum contents of the first aid box shall be as per the supplied list in the General Safety Regulations.

All treatments done must be recorded on a register and kept with the first aid box. A trained and appointed first aider must be responsible for the first aid box and its content. Used content must be replenished as soon as possible.

In order to ensure prompt response at the emergency facility it is recommended that the W.Cl 2 forms be partially completed with the employers' details.

d) Hygiene Facilities

The Principal Contractor and his contractors shall ensure compliance to Section 30 of the Construction Regulations with regards to facilities on the construction site as well as where accommodation is provided to employees on remote sites. The Principal Contractor shall ensure that the facilities are kept clean at all times, either through a service provider or self-employed persons. The Principal Contractor shall provide employees with at least one sanitary facility for each sex and for every 30 workers, changing facilities for each sex and sheltered eating areas.

E1013 WASTE MANAGEMENT

The Principal Contractor shall comply with all applicable and relevant Waste management legislation, as well as municipal bylaws applicable to waste management.

The Principal Contractor shall remove all waste generated at the construction site on a daily basis or as soon as possible after generation to ensure good housekeeping at all times. The Principal Contractor shall have a waste management plan which must be implemented on the construction site and which will have the objective to ensure that waste is managed according to the Waste Management Hierarchy:

- Reduce what you can. If you cannot reduce then,
- Re-use what you can. If you cannot re-use then,
- Recycle what you can. What you cannot recycle,
- Convert into energy sources. If it cannot be converted to an energy source,
- Dispose of in a landfill – this is only to be done as a last resort and disposed without endangering human health and without using processes or methods which could harm the environment.

E1014 HAZARDOUS SUBSTANCE MANAGEMENT

The Principal Contractor shall ensure that hazardous substances brought onto site are easily identifiable and stored according to the requirements of the General Safety Regulations, GNR. 1031 of 1986, Section 4.

Where flammable liquids are being used or stored, this must be done in a manner which would not cause a fire or explosion hazard.

The Principal Contractor shall have Material Safety Data Sheets (MSDS) readily available for flammable, hazardous and toxic chemical substances and materials brought onto site and shall ensure that his employees are trained in these MSDS's.

Flammable, hazardous or toxic chemical substances may not be stored in empty food or drink containers. Empty flammable, hazardous and toxic containers must be disposed of in a safe manner, which will prevent further use of such a container.

A survey of the construction site must be done during site establishment, to locate any asbestos. Should asbestos be located, the conditions of the Asbestos Regulations, GNR. 155 of 2002 must be followed and complied with.

E1015 CONTRACTORS

a) Consultations, Communications and Liaison

OH&S liaison between the Employer, The Principal Contractor, The Contractors, the designer and other concerned parties will be through the OH&S committee. In addition to the above, communication may be directly to the Employer or his appointed agent, verbally or in writing, as and when the need arises.

Consultation with the workforce on OH&S matters will be through their construction managers and supervisors, OH&S representatives and the OH&S committee.

The Principal Contractor shall be responsible for the dissemination of all relevant OH&S information to The Contractors e.g. design changes agreed with the Employer and the designer, instructions by the Employer and/or his/her agent, exchange of information between subcontractors, the reporting of hazardous/dangerous conditions/situations etc. The Principal Contractors' most senior manager on site shall be required to attend all OH&S meetings.

b) Operational Procedures

Each construction activity shall be assessed by The Principal Contractor so as to identify operational procedures that will mitigate against the occurrence of an incident during the execution of each activity. This specification requires The Principal Contractor:

- To be conversant with all relevant Regulations;
- To comply with their provisions;
- To include them in his OH&S plan where relevant

c) Checking, Reporting and Corrective Actions

i) Monthly Audit by Employer (Construction Regulation 5(1)(o)

The Employer will conduct monthly health and safety and document verification audits in compliance with Construction Regulation 5(1) (o) in order to ensure that The Principal Contractor has implemented and is maintaining the agreed and approved OH&S plan.

The Principal Contractor will ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the Principal Contractor and any contractor, but at least once every 30 days.

The Principal Contractor will be provided with a copy of the Health and Safety audit report within seven days after the audit. The employer or his representative may stop any Principal Contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the client's health and safety specification and the Principal contractor's health and safety plan for the specific site.

ii) Other Audits and Inspections by the Employer

The Employer reserves the right to conduct other ad hoc audits and inspections as deemed necessary. This will include site safety walks.

iii) Principal Contractor's Audits and Inspections

The Principal Contractor must conduct his own regular internal audits to verify compliance with his own OH&S management system, as well as with this specification. The Principal Contractor shall furthermore ensure that each contractor`s health & safety plan is being implemented by conducting periodic audits at intervals mutually agreed between The Principal Contractor and contractors, but at least once per month.

iv) Inspections by OH&S Representatives and other Appointees

OH&S representatives shall conduct weekly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees shall conduct inspections and report thereon as to

their foreman or supervisor whilst other appointees shall conduct inspections and report thereon as specified in their appointments e.g. vehicle, plant and machinery drivers, operators and users must conduct daily inspections before start-up.

v) Recording and Review of Inspection Results

All the results of the abovementioned inspections shall be in writing, reviewed at OH&S committee meetings, endorsed by the chairman of the meeting and placed on the OH&S File.

d) Project Health and Safety Management Plan

As per Section 5(1) (l) and Section 7(1) (a) of the Construction Regulations of 2014, The Principal Contractor shall develop, implement and administer a Health and Safety Management Plan. The plan shall be in writing and shall be negotiated between The Principal Contractor and SANRAL or designated OHS Agent and must be approved by SANRAL or the designated OHS Agent prior to the commencement of work on site.

The plan shall demonstrate management's commitment to ensure employee health and safety as their primary objective during the contract. As a suggestion, the following elements may be used to develop the H&S plan:

Introduction
Mission
Purpose & Scope
Health, Safety and Environmental Policy Health
Safety and Environmental Goals
Plan Objectives

Leadership and Commitment
Values supporting commitment
Roles, Responsibilities and Accountability

Hazard and Risk Management Process
Effective Consultation
Planning

Contractor HSE Alignment
Sub-Contractors
On-Site

Learning and Competency
Project HSE Training and Competency Requirements
Contractor & Sub-Contractor Duties
Minimum Training Requirements
Medical and Induction
Employee details
Visitors to site
Induction

Involvement, Communication and Motivation
Safety Meetings
Health & Safety Behaviour
Information and Learning

Hazard and Risk Management on site
Hazardous Activities
Hazardous Areas
Hierarchy of Hazard Control
Hazard and Risk Identification
Risk Analysis and Evaluation
Documented safe work procedures for hazardous activities
Hazard and Risk monitoring plan
Hazard and Risk review plan

Occupational Health and Hygiene
- Fitness for Work
- Airborne Pollutants
- Hazardous Chemical Substances
- Noise and Vibration
- Personal Hygiene
- Protection of Outdoor Workers
- Occupational Health Services on Site

Performance Tracking and Accountability
- Positive Performance Indicators
- Workplace Observations and Audits
- Reporting

Incident Management
- Emergency Preparedness and Response
- Incident Management
- Injury Management

Waste Management
- Hazardous Waste
- Non Hazardous Waste - Recyclable
- Non Hazardous Waste – Non recyclable

e) Project Health and Safety File

The Principal Contractor shall compile a project specific Health and Safety File that consist of all the relevant project specific documentation. The Health and Safety file may consist of multiple files, which when combined should contain all the required documentation.

It is recommended that the project specific Health and Safety file contain at least the following:
- Scope and summary of the project as well as any scope changes.
- Notification of Construction Work to DoL / Copy of Work Permit
- Proof of COID registration (Letter of Good Standing)
- Contractor Health and Safety Policy statement signed by management
- Mandatory Agreement – OH&S Act 37.2 (Between Employer and Principal Contractor)
- Signed Client Health and Safety specification
- Latest copy of the OHS Act end Regulations
- Company Organogram depicting Health and Safety Responsibilities, including sub- contractors
- Employee list including copy of ID's and medicals
- Project specific Health and Safety Management Plan agreed with the Employer – See point 16.4 above
- Relevant OH&S Legal appointments which includes duties and responsibilities as well as competencies (training certificate)
- Copies of minutes of meetings - OH&S committee and other relevant OH&S meeting minutes
- Designs/drawings (Construction Regulation 7(1)(e)
- Site specific Fall Protection Plan (if applicable)
- Risk Assessments
- Occupational Hygiene Surveys.
- Calibration Certificates
- Accreditations of Service Providers
- Contractor Induction material
- Waste management Plan
- Emergency preparedness (first aid, firefighting, emergency plan, etc.)
- Emergency Contact Telephone numbers
- HIV awareness program
- List of hazardous chemical substances used on site
- Material Safety Data Sheets of hazardous chemicals on site
- List of plant & equipment to be used on site
- Inspection Checklists/Registers of plant & equipment and emergency equipment
- List of Sub-contractors including type of work
- Sub-contractor 37.2 Mandatary Agreements

- Sub-contractor appointments which shall include the type of work The Principal Contractor is appointed for.

f) Contracting Philosophy

Any site specific hazards and safety management expectations will be made known to The Principal Contractor prior to the work commencing on site. Legal OHS requirements contained in the OHS Act and Regulations as well as SANS Codes are the minimum requirements The Principal Contractor must apply during this contract with regards to Occupational Health and Safety. The Principal Contractor shall apply, implement and enforce the minimum OHS Act & Regulations and SANS Codes requirements.

g) Workers Compensation Registration

The Principal Contractor shall ensure that his employees are covered for any occupational injuries and illnesses in terms of the Occupational Injuries and Diseases Act 130 of 1993, which cover shall remain in place and up to date for the duration of the project.

h) HSE Non-Compliance

It is a legal duty of the client according to the Construction Regulation 5(1) (q) that a Principal Contractor is stopped from executing any activity which poses a threat to the health and safety of persons. Depending on the seriousness of the non-compliance only the specific activity may be stopped until the non-compliance is rectified or the whole operation may be stopped.

It is also the duty of every employee to take reasonable care of his own health and safety and of other persons who may be affected by his acts as per OHS Act, Section 14(a). Keeping this in mind, it is required of The Principal Contractor to ensure his employees has the right to remove themselves from any unsafe situation or work activity, without any negative consequence to them until such time as The Principal Contractor has made the unsafe situation or activity as safe as practicable possible.

i) Indemnity by Contractor

The Principal Contractor shall indemnify the Employer against and from all damages, losses and expenses (including legal fees and expenses) resulting from:

i) The loss of output and delay caused by the slowing down or partial or total stoppage of work caused by:
   - all or any of The Principal Contractor's workforce as a result of a dispute between all or any of the Principal Contractor's workforce and The Principal Contractor; or
   - all or any of the Principal Contractor's suppliers' difficulty or impossibility to deliver goods or materials needed to perform the Works;

ii) Any unlawful, riotous or disorderly conduct by or amongst the Principal Contractor's personnel."

j) The Principal Contractor Conduct

Guidelines to the most important rules that shall be implemented and maintained by the Principal Contractor:

- Complete compliance to the OH&S Act 85 of 1993 and Regulations
- Hazard identification and Risk Assessments for all activities
- Daily communication of DSTI talk before work commences
- Safe access and egress to and from work areas.
- Compulsory use of lifelines, Safety Harnesses and Fall Arrestors (Lanyards to be attached at all times)
- Scaffold shall comply with Legal and SANS standards at all times
- Good housekeeping and stacking practices
- Safe lifting, rigging and slinging practices
- Complying to Legal standards for lifting machinery & equipment
- No lifting in wind conditions exceeding 30km/h (This is a guide and is dependent on risk assessments)
- Securing of tools, equipment and material at heights
- Wearing of appropriate personal protective equipment as identified in the risk assessment

Supervisors in charge are responsible for ensuring that the employees are aware of the hazards /risks involved in the work they will be doing/are doing and shall ensure the safety rules are obeyed.

No person shall act in a manner that endangers or is likely to endanger, the safety of any other person, or

cause harm to any other person.

An employee who observes any dangerous situation, shall as soon as possible inform the person who is responsible for that section of the site.

Any employee who becomes aware of any person disregarding any safety rules, shall remind that person of the rules. If he persists in disregarding the rules, the matter must be reported to his supervisor.

No person shall damage, alter, remove, render ineffective or interfere with anything that has been provided for the protection of the site, or for the health and safety of persons.

No person shall interfere with or use firefighting equipment without authority and training.

No person in a state of intoxication or condition that render him incapable of controlling himself shall enter or be allowed to enter the site.

No alcohol or illegal drugs shall be taken onto the site. All safety and warning signs shall be obeyed.

Always be alert of construction vehicles as well as traffic. Never turn your back to oncoming traffic, always have a line of sight.

k) Principal Contractor and Contractor Management

The Principal Contractor shall establish, maintain and ensure that all his contractors establish and maintain HSE standards and systems as necessary and to comply with the Legal requirements as well as these HSE specifications.

The Principal Contractor shall be solely responsible for carrying out work on the project, having the highest regard for the health and safety of his employees and people in the vicinity of his work area.

l) Public Health and Safety

The Principal Contractor shall, as far as is reasonably practicable, be responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimise those dangers.

This includes:

- Non- employees entering the site for whatever reason
- The surrounding community
- Passers-by to the site.

E1016 DESIGNING FOR HEALTH, SAFETY AND THE ENVIRONMENT

Designing for safety is a process aimed at minimizing injury, death, property damage or destruction and harm to the environment, by utilizing an approach to identify and eliminate or control hazardous areas. The project Designer and Contractor must implement a process that ensures safety is incorporated in the design process, which includes temporary works as contemplated in the Construction Regulations, 2014 Section 12.

The Principal Contractor must communicate the anticipated risks and hazards resulting from the design to his employees and establish safe work procedures for the temporary works.

E1017 INCIDENT MANAGEMENT

The Principal Contractor shall ensure that a culture exists within his company that promotes the recognition, response, reporting and investigation of incidents, including near misses (near hits). The Principal Contractor must implement a procedure for reporting and investigating accidents, incidents and near misses. The Principal Contractor should have a clear objective and target to obtain zero injuries for the duration of the project and such an objective must be communicated to all employees.

Appropriate corrective actions must be implemented and the applicable learnings must be shared within The Principal Contractors business to prevent a recurrence of the incident or to prevent the near miss from becoming an incident in future.

(a) Incidents and Accidents

The Principal contractor and his contractors shall coordinate their investigation of all accidents/incidents where employees and non-employees were injured to the extent that he had to be referred for medical treatment by a doctor, hospital or clinic. The results of the investigation shall be entered into an accident/incident register, which must be updated with each accident/indent.

The Principal Contractor shall notify the relevant SANRAL Project Manager and or SANRAL OHS Specialist of any incident/accident within the Principal Contractors or his Contractors area of responsibility in writing as soon as possible.

Although the accident/incident is reported to the client, the Principal Contractor has a responsibility and is required by law to report any Section 24 accidents and incidents to the Department of Labour. Any road traffic accident must be reported to the relevant authorities.

It is essential that The Principal Contractor demonstrate that corrective and preventative action has been taken to prevent a similar incident in future and that it is communicated to all The Principal Contractors affected staff. A copy of the investigation, corrective and preventative action taken as well as the attendance register of the employees who attended the discussion of the incident and the action implemented to prevent a similar incident, must be forwarded to the SANRAL Project Manager and or the SANRAL OHS Specialist.

Investigations must be completed for:
- Near Miss Incidents (To prevent it from becoming an incident)
- First Aid case Incidents
- Medical treatment case Incidents
- Fatalities

(b) Incident Reporting

The Principal Contractor shall provide the Employer with copies of all statutory reports required in terms of the Act within 7 days of the incident occurring. In addition, The Principal Contractor shall update monthly the Disabling Injury Frequency Ratio (DIFR) and display this information on a signboard at the site office.

The Principal Contractor is responsible for collecting, recording, calculating and reporting his and his sub-contractors Health & Safety statistics to the SANRAL OHS Specialist.
The statistics should contain at least the following for all employees of all contractors working on the project:
- Total Number of workers
- Total Number of hours worked (on the SANRAL project)
- Total Number of Near Miss Incidents
- Total Number of First Aid case Incidents
- Total Number of Medical Treatment case Incidents (Excluding Section 24 type incidents)
- Total Number of Section 24 type Incidents
- Preventative actions taken on incidents that have occurred
- Communication to employees and contractors of incidents and preventative actions.

E1018 PROJECT SPECIFIC CONSTRUCTION REQUIREMENTS

The clause contains specific requirements for CONTRACT RAUBEX-CPG N.002-212-2018/1, which must be adhered to in addition to minimum legislative requirements.

a) Baseline Risk Assessment

The following is a list of risks identified which forms the Baseline Risk Assessment for the project prepared by the Client in terms of Construction Regulation 5(1) (a):

Risks in connection with:

- Personal health risks in connection with ablution facilities, eating areas, drinking water.
- Secure/safe storage of materials, plant and equipment
- Secure/safe storage and use of hazardous and/or flammable materials
- Maintenance workshop - onsite repairs to construction vehicles, mobile plant & equipment.
- Existing services, e.g. gas, telecommunications, electrical supply and similar

- Temporary electrical installations
- Adjacent land uses/surrounding property exposures
- Boundary and access control/public liability exposures (NB: The Employer is also re-sponsible for the OH&S of non-employees affected by his/her work activities)
- Risks associated with Insects and Reptiles e.g. bees, snakes, spiders
- Environmental risks, e.g. lighting, strong winds, heavy rains, dark environments, hot/cold and wet environments
- Exposure to a water environment
- Exposure to noise
- Exposure to vibration
- HIV/Aids and other diseases such as silicosis or asbestosis, where applicable
- Use of portable electrical and Fuel driven equipment including, but not limited to:
  - Angle grinder
  - Electrical drilling machine
  - Circular saw
  - Generator
- Excavations including, but not limited to:
  - Ground/soil conditions
  - Trenching
  - Shoring
  - Drainage of trenches
- Welding including, but not limited to:
  - Arc welding
  - Gas welding
  - Flame cutting
  - Use of LP gas torches and appliances
- Loading and off-loading of trucks, including material deliveries
- Manual and mechanical handling
- Lifting and lowering operations
- Driving and operation of construction vehicles and mobile plant including:
  - Excavator
  - Bomag roller
  - PTR Roller
  - Front end loader
  - Mobile cranes and the ancillary lifting tackle
  - Grader
  - Chip Spreader
  - Milling Machines
  - Parking of vehicles and mobile plant
  - Towing of vehicles and mobile plant
- Layering and bedding
- Overhead Electrical Cables
- Work adjacent or in proximity of traffic
- Working in elevated positions
  Formwork and support work (temporary works) including scaffolding
- Demolition work
- Bulk mixing plant
- Environmental impacts such as pollution of water, air or soil.
- Pre-treatment works to the existing pavement and surfacing e.g. hydro-cutting, crack sealing, repairing of edge breaks, construction of base and surface (asphalt) patches, slurry work.
- Road Seal Work
- Re-surfacing of bridge decks
- Asphalt Surfacing.
- Removal of existing asphalt surfacing from bridge deck by hand
- Priming of steel bridge deck prior to re-surfacing
- Removal and re-instatement of existing services such as traffic counting stations and traffic signals.
- Replacement of the bridge expansion joints.
- Repair of localised damaged concrete drains, kerbing and channelling.
- Replacement and re-erection of existing guardrails. Construction of pedestrian walkway.
- Traffic accommodation.
- Community Unrest

- Animals from Neighbouring communities entering Construction Area

The baseline risk assessment will be supplied by the Client's Construction Health and Safety Agent to the Appointed Principal Contractor before work commences.

b) Daily Site Attendance Register

The Principal Contractor shall keep a daily site register so as to be able to identify the entire Contractors personnel on site in case of an emergency or evacuation situation. The attendance register must include permanent as well as temporary workers working on the site.

All site visitors and any new contractors shall report to security/reception upon arrival at site. The Principal Contractor will only be granted first time access to work on the site if all required documentation has been provided and approved.

All visitors need to sign an attendance register when visiting the site. Visitors include all persons which are not permanently working on the site, but excludes temporary site workers. Visitors must undergo site induction training before they are allowed on site to make them aware of the site dangers.

c) Emergency Numbers / Emergency Evacuation

A list with emergency numbers must be readily available to first aiders and supervisors. Emergency numbers must be site specific and must display the nearest emergency facilities.

The Principal Contractor shall identify and formulate emergency procedures in the event an incident does occur. The emergency procedures thus identified shall also be included in The Principal Contractor's OH&S plan and communicated as part of induction training. It is the responsibility of the first aid worker, together with the construction supervisor, to make an assessment regarding the severity of injuries and which actions are appropriate. For example: transfer to a medical facility by ambulance or helicopter.

The Principal Contractor must implement an emergency evacuation procedure on site to ensure that in case of an emergency, all staff will leave their place of work when the emergency siren is sound and proceed to the demarcated emergency assembly point. The emergency assembly point must display the sign "Emergency Assembly Point".

An evacuation route diagram must be displayed and visible at strategic points in buildings and on notice boards.

All staff working on site must be given awareness training on the emergency evacuation procedure and evacuation drills must be exercised to ensure all staff know the correct procedure to follow in case of an emergency.

d) Site Security

Certain areas where work must be carried out, is recognized unsafe areas and certain other areas may from time to time become unsafe, due to 3rd party actions. The Principal Contractor must as far as reasonably possible anticipate unsafe areas and must ensure that his site staff is safe from 3rd party actions, which include but is not limited to:

- Unrests & Violent Demonstrations
- Theft
- Injury from 3rd parties at all times

The Principal Contractor must, when work is to be carried out in the above-mentioned areas, make provision for security services to accompany site staff during the execution of their work, as The Principal Contractor is responsible for the Health, Safety and Security of his own staff. The provision for security services must form part of The Principal Contractors tender.

e) Personal Protective Equipment

Comply with General Safety Regulations, Section 2

The Principal Contractor shall identify the hazards in the workplace and deal with them. He must either remove them or, where impracticable, take steps to protect workers and make it possible for them to work safely and without risk to health under the hazardous conditions.

Personal protective equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered. The hierarchy of hazard elimination must be followed before the option of personal protective equipment is considered. The following hierarchy of controls must be followed:

- Elimination
- Passive Controls
  - Substitution – Using a cherry picker or man-lift instead of a ladder.
  - Engineering Controls – Installing barrier railings; Installing stairs instead of using vertical ladders.
- Active Controls
  - Administrative policies and procedures
  - Personal protective equipment

Where it is not possible to create an absolutely safe and healthy workplace The Principal Contractor shall inform employees regarding this and issue, free of charge, suitable equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in the hazardous environment.

It is a further requirement that The Principal Contractor maintain the said equipment, that he instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s.

Employees do not have the right to refuse to use/wear the equipment prescribed by the Employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other reason, the employee cannot be allowed to continue working under the hazardous condition/s for which the equipment was prescribed but an alternative solution has to be found that may include relocating the employee.

The Principal Contractor shall include in his OH&S plan the PPE he intends issuing to his employees for use during construction and the sanctions he intends to apply in cases of non- conformance by his employees. Conformance to the wearing of PPE shall be discussed at the weekly inspection meetings.

The Principal Contractor shall ensure that all his personnel, excluding those who are permanently office bound, are equipped with reflective safety jackets and that these are worn at all times when working on site. Any person found not wearing a reflective jacket on site must be removed from the site until such time as he is in possession of and wearing a reflective jacket. Reflective safety jackets shall be kept in good condition and any jackets that are ineffective must immediately be replaced by The Principal Contractor.

f) Site Supervision

Comply with Construction Regulation, Section 8

The Principal Contractor shall appoint a competent Construction Manager who shall be responsible for the construction activities and for ensuring occupational health and safety compliance on the construction site.

g) Excavations

Comply with Construction Regulations, Section 13

The Principal Contractor shall ensure that all excavations are carried out under the supervision of a competent person who has been appointed in writing as Excavation Supervisor.

The Principal Contractor must evaluate the stability of the ground before excavation work begins as well as during excavation work.

Excavations must be barricaded to prevent unauthorized access.

Material removed from excavations, as well as heavy machinery and construction vehicles, must not be closer than 1 meter of the edge of the excavation, to prevent additional loads on the excavation edge, which could cause cave-ins, to prevent construction vehicles from falling into the excavation and to prevent the accumulation of carbon monoxide gas inside the excavation.

The principal contractor and its contractors must cause every excavation which is accessible to the public or which is adjacent to the public roads or thoroughfares, or whereby the safety of persons may be endangered, to be –

- Adequately protected by a barrier or fence and as close to the excavation as is practicable; and

- Provided with warning illuminants or any other boundary indicators that are clearly visible at night or when visibility is poor.

People working in the excavation must be adequately protected from cave-ins, by means of protection systems such as trench boxed and shielding and must have a safe means of access into the excavation and egress from the excavation.

h) Cranes

Comply with Construction Regulation, Section 22, General Machinery Regulation, and Section 18.

Crane operators must be competent to carry out their work safely and must be in possession of a valid medical certificate of fitness, issued by an occupational health practitioner.

The wind factor should always be taken into consideration when operating cranes and that a wind speed device is fitted that provides the operator with an audible warning when the speed exceeds the design engineer specification. Upon noticing that the wind speed is equal or more than the specified speed limit, the operator should stop immediately.

i) Construction Vehicles & Mobile Equipment

Comply with Construction Regulation, Section 23, National Road Traffic Act, 1996

Construction vehicle operators must have received training to operate the class of construction vehicle or mobile equipment and must be in possession of an operator's card as proof of competency. Construction vehicle operators must be authorised in writing and have a medical certificate of fitness issued by an occupational health practitioner to operate the construction vehicle and/or mobile equipment. Amber rotating light and approved vehicle magnetic stickers are mandatory.

j) Electrical Equipment

Comply with Construction Regulations, Section 24.

The Principal Contractor shall take adequate steps to ascertain the presence of and guard against danger to workers from electrical cables or apparatus which is under, over or on the site. The exact location of underground electric power cables must be determined before any excavators are used for excavation purposes. The location of overhead electrical cables must be assessed when working with cranes and lifting equipment. Injury may be possible from touching the electrical cables with the crane boom, or from arching when the crane boom comes too close to the electrical cable. All temporary electrical installations must be inspected at least once a week by a competent person and the records of the inspections must be recorded in a register which must be kept on site. Electrical machinery and extension cords must be is a serviceable condition and must be inspected on a daily basis before use on a construction site by the authorised operator and the inspection checklist must be kept on the construction site.

Comply with Electrical Installation Regulations.

All electrical installations shall be inspected and approved by an accredited electrical inspector and a valid Certificate of Compliance must be issued for the installation. All electrical installations carried out on site (permanent and temporary) must be in accordance and comply with the Electrical Installation Regulations. All power supplies and generating units must be fitted with a functional earth leakage device.

k) Temporary Storage of Flammable Liquids

Comply with Construction Regulation, Section 25 and General Safety Regulations, Section 4

The Principal Contractor must ensure storage areas of flammable liquids are well ventilated and "No Smoking" signs are placed at the entrances and ventilation ducts of the storage areas. Firefighting equipment must be available in suitable positions around the storage areas.

The Principal Contractor must ensure that good housekeeping is practiced in and around the flammable storage areas.

l) Water Environments

Comply with Construction Regulation, Section 26.

The Principal Contractor must ensure that a lifejacket forms part of the employees PPE and is worn when the

employee is exposed to the risk of drowning, by falling into water.

The risk assessment must make provision for the rescuing of persons in danger of drowning and for preventing employees from falling into the water.

When working over water environments, Section 10 of the Construction Regulations – Fall Protection will also apply.

m) Housekeeping

Comply with Construction Regulation, Section 27, Environmental Regulations for Workplaces, Section 6(3).

The Principal Contractor shall ensure that suitable and acceptable housekeeping is continuously implemented and maintained on the construction site. Off-cuts and waste must be removed by the end of the shift or as soon as practicable.

n) Stacking & Storage of Material, Plant & Equipment

Comply with Construction Regulations, Section 28 and General Safety Regulations, Section 8.

The Principal Contractor shall appoint a competent person in writing with the duty of supervising all stacking and storage operations on site.

Stacking shall only take place in areas specifically demarcated for this purpose. Circular items must be secured with wedges or chocks.

Items removed from a stack shall only take place from the top most layer of the stack.

Stacks shall not obstruct any fire extinguishing equipment, first aid equipment, electrical switchgear (DB Boxes) and ventilation or lighting installations.

Unstable stacks must be broken down immediately.

o) Fire Precautions

Comply with Construction Regulation, Section 29.

The Principal Contractor must provide his own firefighting equipment that is within the service date and safe for use. Firefighting equipment must be on a register and inspected by a competent person who has been appointed in writing.

Suitable and sufficient fire extinguishing equipment must be placed at strategic locations and a sufficient number of firefighters must be available, which must be trained in the use of it.

p) Intoxicating Liquor and Drugs

Comply with General Safety Regulations, Section 2A.

The site limit for intoxication is set to zero to complement a vision of zero tolerance.

Any person found to be intoxicated, or consuming intoxicating liquor or illegal drugs, will not be allowed onto the premises and/or will be removed from the premises.

The Principal Contractor has the right to test any person entering the premises for intoxicating liquor or illegal drugs and may refuse entrance on the basis of the outcome of the test.

The Principal Contractor shall ensure that employees taking prescription medicine informs The Principal Contractor of such and shall ensure that the side effect of such medicine does not constitute a hazard to the employee himself or people working in close vicinity to the employee.

q) Site Services

The Principal Contractor shall provide and maintain on the Site adequate and suitable sanitary services and a

supply of potable water for all persons engaged in managing and working on the construction site and, if necessary, similar facilities elsewhere for such personnel off the Site.

i) Drinking Water

The Principal Contractor must ensure that an adequate supply of potable drinking water is available for all persons engaged in managing and working on the construction site and, if necessary, similar facilities elsewhere for such personnel off the Site. Employees working in hot conditions must consume enough water per hour to prevent dehydration.

Where water is unsafe for human consumption, it must be so indicated by means of adequate signage.

ii) Accommodation

The Principal Contractor shall comply with the requirements of Construction Regulation 30 with regards to employee's facilities and accommodation. Reasonable and suitable living accommodation must be provided to employees who are far removed from their homes.

iii) Traffic Accommodation

The Principal Contractor must ensure that the traffic is properly organized and controlled in any work situation by providing adequate signalling or other control arrangement to guard against the dangers relating to the movements of vehicles and plant. The plant and vehicles are equipped with an automatic acoustic reversing alarm.

When the Principal Contractor is executing night work a permission should be sourced from the Engineer. The Principal Contractor must put in place visible or reflective signs that can be seen by motorist at a distance. If a stop and go method is used flag persons must be properly trained on how to control the traffic. The Principal Contractor must develop a clear Traffic Management Plan.

PART C4: SITE INFORMATION

PART C4 SITE INFORMATION

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Information Only
All data and descriptions contained in this section of the Subcontract documents are given for information purposes only and cannot be interpreted as prescriptive or as an instruction despite the fact that the text may give the opposite perspective. If any conflict arises between the content of this section and other sections of the Subcontract documents, the latter take precedence.

C4.1 DESCRIPTION OF THE WORKS

The Works comprises of the Periodic Maintenance of National Route 2 Sections 21 and 22 from Izingolweni to Murchison KM 101.1(N2/21) to KM 18.4 (N2/22). This project is situated in the province of Kwazulu-Natal, in the District Municipality of Ugu (DC21) and the Ray Nkonyeni Local Municipality. The Work packages span over the Contract length of 23.7 km and have an approximate duration three (3) months for each work package as detailed.

This contract entails, amongst others, the following:

- Patching and repairing edge breaks
- Precoating of aggregate
- Labour only for the treatment of an existing surface exhibiting certain defects

Please refer to the Locality Plan included in **Appendix 1**.

Note:

The tenderer should note that the description of the works that follows is not necessarily complete and no reliance can be placed on it to arrive at methods or quantities of work to be carried out under this contract.

Details of the work are shown on the drawings and estimated quantities of the various types of work to be carried out under the contract are given in Part C2: Pricing Schedule.

C4.2 DRAWINGS

The drawings that form part of the tender document are issued for tender purposes only.

The Sub-contractor will be supplied with one set of paper prints and all the construction documentation can be downloaded from www.c-pmc.co.za.

Only figured dimensions may be used and drawings may not be scaled unless so instructed by the engineer. The engineer will supply all figured dimensions omitted from the drawings.

C4.3 CAMP ESTABLISHMENT, POWER SUPPLY AND OTHER SERVICES

The Sub-contractor will be supplied a site laydown area, no office facilities will be provided.

C4.4 CONSTRUCTION IN CONFINED AREAS

It will be necessary for the Sub-contractor to work within confined areas. In certain places the width of the fill material and pavement layers may decrease to zero and the working space may be confined. The method of construction in these confined areas largely depends on the sub-contractor's constructional plant.

C4.5 MANAGEMENT OF THE ENVIRONMENT

The Sub-contractor will be responsible for construction according to an environmental management plan in terms of Section C1000 Scope of Works.

The sub-contractor must take the utmost care to minimise the impact of his establishment and other construction activities on the environment and must adhere to the requirements as set out in Section C of the Scope of Works. Where the contractor fails to adhere to these requirements the specifications in Section C of the Scope of Works provide the methodology and cost liability of remedy.

C4.6 TRAFFIC

Traffic information

The observed Annual Average Daily Traffic (AADT) and Annual Average Daily Truck Traffic (AADT), for the year 2016, are as follows:

Station No	From – To (km)	Annual average daily traffic (AADT)		Annual average daily truck traffic (ADTT)		Percentage of trucks	
		NB	SB	NB	SB	NB	SB
19757	14.98 - 16.39	4 076	4 052	276	287	6.8%	7.1%
1057	22.99 - 27.79	5 607	5 607	310	324	5.5%	5.8%

C4.7 SMALL CONTRACTOR DEVELOPMENT, TRAINING AND COMMUNITY LIAISON

The South African National Roads Agency SOC Limited is committed to the implementation of Government's policies and in turn expects the same from its contractors. Accordingly, it is a requirement of this project that tenderers are familiar with the specifications that relate to the transformation of the construction industry through the following:

(i) Adherence to the policies of the Reconstruction and Development Programme and other similar Government initiatives,
(ii) Employment and/or creation of Targeted Enterprises,
(iii) Arrangement of generic skills, engineering skills and entrepreneurial skills training programs for which provision has been made in the Pricing Schedule,
(iv) Construction using labour maximization principles and,
(v) Active participation with community-based structures.

C4.8 CLIMATE

National Route 2 Sections 22 fall within the summer rainfall region of the KwaZulu-Natal Province with a mean annual rainfall of 1249mm. Please refer to **Appendix 2** for a copy of the WB42 Form for Margate Station No. 0182591A4.

Maximum and minimum temperatures are indicated in the table below:

Average and extreme maximum and minimum temperatures for Margate

Month	Maximum ° C		Minimum ° C	
	Average	Extreme	Average	Extreme
January	30.7	35.8	16.7	14.7
February	30.8	34.9	17.6	14.8
March	30.0	34.5	16.0	13.8
April	30.0	33.8	14.4	12.7
May	30.5	37.3	12.2	9.0
June	29.4	32.2	10.6	7.6
July	30.3	34.6	10.2	4.9
August	29.7	33.8	10.9	8.9
September	30.6	35.3	11.7	9.8
October	29.6	35.6	12.7	10.5
November	29.8	39.5	14.0	11.6
December	30.7	38.8	15.7	13.7

The rainfall data is indicated in the table below:
Average monthly rainfall for Margate

Month	Average rainfall (mm)	Days with more than 5mm rain
January	160.0	6
February	103.0	4
March	158.0	5
April	84.0	3
May	45.0	2
June	55.0	2
July	51.0	1
August	38.0	2
September	83.0	4
October	133.0	6
November	162.0	7
December	177.0	6
Total	**1249.0**	**48**

C4.9 REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS 2014

Refer to Section E of the Scope of Works for general requirements in terms of the OH&S requirements.

C4.10 SAFETY PROCEDURES

All safety procedures will be addresses with the Sub-contractor during the induction process

C4.11 OTHER INFORMATION

Services

Details of the different services are listed under Clause B1202. It is recommended that the existing traffic signal infrastructure be protected during execution of the Contract.

C4.12 APPENDICES

Appendix 1: Locality Plan

Appendix 2: Weather Data

APPENDIX 1: LOCALITY PLAN

Locality Plan of the Site:



SUBCONTRACT No: RAUBEX-CPG-3CE-212-2018/1 WP 1-2

UNDER CONTRACT SANRAL N.002-212-2018/1 PERIODIC MAINTENANCE OF NATIONAL ROUTE 2 SECTIONS 21 AND 22 FROM IZINGOLWENI TO MURCHISON KM 101.1(N2/21) TO KM 18.4 (N2/22)

South African Weather Service
ISO 9001 Certified Organisation

CLIMATE OF SOUTH AFRICA WB 42 CLIMATE STATISTICS 1981 - 2010

Number: 0182591A4 Name: MARGATE ϕ = 30° 51' S λ = 30° 20' E HT:152m Period: 1993-2010

TABLE 1 - AIR TEMPERATURE IN DEGREES CELSIUS

	AVERAGE OF DAILY				MAXIMUM (TX) P = 18 Years											MINIMUM (TN) P = 18 Years											
	MAX	MIN	MEAN	RANGE	HIGHEST (TXX)			AVERAGE NUMBER OF DAYS WITH TX						LOWEST (TXN)			HIGHEST (TNX)			AVERAGE NUMBER OF DAYS WITH TN						LOWEST (TNN)			
	$\overline{TX}$	$\overline{TN}$	$\overline{(TX+TN)/2}$	$\overline{TX-TN}$	MAX	YY/DD	MEAN	>=35	>=30	>=25	>=20	>=15	<10	MEAN	MIN	YY/DD	MAX	YY/DD	MEAN	>=20	<15	<10	<5	<0	<=5	MEAN	MIN	YY/DD	
J	26.2	20.6	23.4	5.6	35.8	98/28	30.7	0.0	0.8	22.3	30.6	30.7	0.0	21.2	19.0	00/13	24.7	04/13	23.6	20.4	0.1	0.0	0.0	0.0	0.0	16.7	14.7	94/23	J
F	26.8	21.2	24.0	5.5	34.9	95/07	30.8	0.0	1.2	23.1	27.8	28.0	0.0	22.3	18.8	97/27	25.6	95/07	24.0	21.4	0.1	0.0	0.0	0.0	0.0	17.6	14.8	93/17	F
M	26.0	20.0	23.0	6.0	34.5	04/02	30.0	0.0	0.5	22.0	30.6	30.8	0.0	21.4	19.6	96/04	24.2	02/03	22.8	16.6	0.3	0.0	0.0	0.0	0.0	16.0	13.8	93/03	M
A	24.8	18.2	21.5	6.6	33.8	95/19	30.0	0.0	0.7	14.8	28.9	29.7	0.0	20.0	16.5	00/26	23.1	02/29	21.1	5.1	1.9	0.0	0.0	0.0	0.0	14.4	12.7	02/14	A
M	23.7	16.3	20.0	7.4	37.3	04/23	30.5	0.0	0.8	8.1	28.8	30.9	0.0	18.7	14.4	02/30	21.3	97/20	19.8	0.7	7.1	0.0	0.0	0.0	0.0	12.2	9.0	07/22	M
J	22.4	14.5	18.5	7.9	32.2	94/27	29.4	0.0	0.4	4.7	24.8	29.3	0.0	17.1	12.1	94/28	20.2	96/07	18.5	0.1	17.1	0.3	0.0	0.0	0.0	10.6	7.6	94/29	J
J	21.8	13.9	17.9	7.9	34.6	02/27	30.3	0.0	0.9	3.9	23.3	30.6	0.0	16.4	13.4	01/23	19.5	09/22	17.8	0.0	20.8	0.5	0.0	0.0	0.0	10.2	4.9	94/22	J
A	22.0	14.7	18.4	7.3	33.8	95/05	29.7	0.0	0.7	4.5	23.8	30.8	0.0	16.8	14.0	02/14	21.6	03/01	18.9	0.3	16.6	0.3	0.0	0.0	0.0	10.9	8.9	94/22	A
S	22.2	15.6	18.9	6.6	35.3	93/10	30.6	0.0	0.9	3.8	23.5	29.6	0.0	16.0	12.5	04/06	24.2	10/14	19.4	0.2	10.7	0.1	0.0	0.0	0.0	11.7	9.8	04/06	S
O	22.6	16.7	19.7	5.8	35.6	97/04	29.6	0.0	0.7	4.7	25.6	30.8	0.0	17.2	14.6	05/06	21.9	95/12	20.1	1.2	5.8	0.0	0.0	0.0	0.0	12.7	10.5	98/31	O
N	23.9	18.1	21.0	5.9	39.5	94/08	29.8	0.0	0.5	10.3	27.0	29.5	0.0	18.9	16.5	97/27	22.5	94/13	21.5	6.2	2.3	0.0	0.0	0.0	0.0	14.0	11.6	00/09	N
D	25.2	19.5	22.3	5.7	38.8	09/22	30.7	0.0	0.8	17.9	29.9	30.7	0.0	20.1	17.2	06/10	24.1	04/26	22.8	12.6	0.5	0.0	0.0	0.0	0.0	15.7	13.7	02/28	D
YR	23.9	17.4	20.7	6.6	39.5	94/08	34.8	0	9	138	321	358	0	14.4	12.1	94/28	25.6	95/07	24.3	82	83	1	0	0	0	9.4	4.9	94/22	YR

TABLE 2 - PRECIPITATION (and FOG), DRY- AND WETBULB TEMPERATURES, RELATIVE HUMIDITY and CLOUD COVER

	PRECIPITATION (R mm) P = 18 Years													P = 18 Years				TEMPERATURE (°C)						REL HUM (%)				CLOUD (eighths)			
	MONTH	24 HOUR MAX		TOTAL PER MONTH / YEAR				AVERAGE NO. OF DAYS WITH R (mm) >=						AVE NO OF DAYS WITH				MEAN on the hour			MEAN on the hour			MEAN on the hour		MEAN		MEAN on the hour			
	$\overline{TOT}$	RXX	YY/DD	MAX	YEAR	MIN	YEAR	0,1			1	5	10	30	TH	HA	SN	FOG	DRY BULB (P = 18 years)			WET BULB (P = 18 years)			P=18 Years				P=18 Years			
								AVE	MAX	MIN									8	14	20	8	14	20	8	14	20	MAX	MIN	8	14	20	
J	160	146	00/16	345	2000	1	2001	15.2	23	3	10.1	5.8	3.9	1.6					23.3	25.2	22.7	20.9	21.9	21.4	83	78	89	92	49				J
F	103	124	99/04	230	1999	4	2005	11.5	17	2	6.9	3.8	2.8	0.7					23.8	25.9	23.3	21.1	22.2	21.8	82	76	89	97	51				F
M	158	248	03/20	441	2000	43	2002	12.5	20	6	9.2	5.4	3.8	1.6					22.6	25.0	22.3	19.7	21.0	20.5	83	76	89	97	52				M
A	84	154	97/01	296	1997	11	2005	8.7	14	3	6.2	3.4	2.3	0.5					20.6	23.6	20.6	17.3	19.4	18.7	77	72	87	98	39				A
M	45	70	98/15	105	2005	2	1993	6.2	12	1	3.6	2.1	1.3	0.3					18.6	22.7	19.0	14.8	17.8	16.9	69	66	81	97	21				M
J	55	195	08/17	349	2008	0	2001	4.1	9	0	2.9	1.6	0.9	0.4					16.6	21.3	17.4	11.6	15.0	13.9	62	59	74	97	18				J
J	51	159	04/27	213	1996	0	2006	4.0	10	1	2.6	1.2	0.9	0.4					16.0	20.8	16.9	10.9	14.8	13.8	60	57	74	95	16				J
A	38	50	06/25	95	2006	0	2010	5.8	12	0	3.8	2.1	1.1	0.2					17.1	20.7	17.5	13.3	15.9	15.1	68	65	80	96	18				A
S	83	126	06/26	272	2006	12	1994	9.2	16	3	6.7	3.7	2.2	0.8					18.3	20.8	18.1	14.9	16.9	16.2	75	72	85	97	26				S
O	133	136	06/03	280	1999	17	2002	15.5	25	7	11.4	6.4	3.8	1.0					19.7	21.2	18.9	17.1	18.1	17.6	79	77	88	97	41				O
N	162	164	01/15	443	2001	15	2000	16.4	23	9	12.2	6.5	3.9	1.4					21.1	22.6	20.2	18.4	19.3	18.7	79	77	88	98	39				N
D	177	170	06/09	402	2006	48	2004	15.7	23	1	11.1	6.0	3.9	1.7					22.4	23.9	21.6	19.4	20.6	19.9	80	78	89	98	45				D
YR	1210	248	03/20	1,826	1997	727	1993	123.0	159	78	87	48	31	11					20.0	22.8	19.8	16.8	18.7	18.0	75	71	85	99	12				YR

Period = years covering the data for all the columns of both tables. P = Average number of years covering the data in the columns concerned. TX = Average maximum, TN = Average minimum air temperature

TXX = Highest maximum, MAX = highest in P years. TXN = Lowest maximum, MIN = lowest in P years. TNX = Highest minimum, MAX = highest in P years. TNN = Lowest minimum, MIN = lowest in P years.

$\overline{\ }$ = MEAN = AVE = AVERAGE e.g. 08, 14, 20 = MEANS of observations which were made on these hours (SAST). YY/DD = Year/Day of occurrence of the extreme in the previous column.

(Number of days (NOD) with TX >= 10) = (NOD in the month - NOD with TX < 10). TH = Thunder, HA = Hail, SN = Snow, FOG = fog. > signifies greater than, >= signifies greater than or equal to.

(Number of days (NOD) with TN < 20) = (NOD in the month - NOD with TN >= 20). < signifies less than, <= signifies less than or equal to.

PART C5: ANNEXURES

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